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AGRICULTURAL SCIENCE.

When agriculture is studied and pursued as a science, there will be no more guess-work about crops. The earth then will be a garden: men will have advanced to knowledge; and it will be worth while to be a farmer. To be a farmer then will be the highest attainment, next to the interests of the State. America will then be more than an English garden. With all her variety of climate, soil, and general salubrity, and her free institutions, and her unrivalled chances of commerce, she will take the rank in the world's advancement. And this era is not distant. We are being borne along by the momentum, which is constantly increasing. Now we are in the infancy of science. The few explorers are pioneers. Fifty years hence the change will amount to a revolution. Mark the strides of only a decade; not alone in agriculture, but in all the departments which must necessarily keep pace, as they are depending upon each other. Agriculture relies upon them. The sooner our farmer boys avail themselves of them, the better. They are a necessity. There is no dodging it. A man must know the principles of his trade, or he will be outstripped. Why should he fear intelligence? The idea is preposterous. He cannot too soon begin. To make two blades grow where one grew before, and those darker, richer; to have a couple heads stand where one stood before: this is simply intelligence, knowing how, i.e. learning how. That is all. But the habit of *not* doing it, is so strong! We must break through the habit and acquire a better; it will then be as easy as the wrong habit. But the world moves, and the sluggard moves with it, or goes under. There will soon be no middle course. In this progressive age, as in religion, there is no standing still. Already this is felt. We may prate about equal rights and freedom as much as we please, there will always—at least for centuries to come, and as long as human nature holds its own—be two great classes, the industrious and the idle. Facts we cannot mince, for such is the case. It is so with us now; it will probably be more and more so as people advance. For the sluggard never advances. He is the same in all nations and ages, in civilization and barbarism—a drone in the hive. He is a sluggard, and necessarily low, idle, degraded. Who will be a sluggard, a sloth? There is but one way to avoid it: by action. Society is so constituted—life itself—that action has become a necessity. A man must work or sicken. There is no help for it. Idleness is under a penalty. Industry bears a premium. Science is the child of industry, and the handmaid of farming. Science

is only fact applied. There is—but let us put it in a separate paragraph—it is important enough—

There is but one fact to everything: we must get that, else we are wrong. The fact about farming is its science, which is its truth, which means to do just the right thing. It means that three times three make nine: that is the only fact about that. If there is a certain quality about soil, let us know what it is; not what is the opinion about it. If we know what it is, we must next know what grain has an affinity for it, what grain needs that quality, and then apply it. This is the fact of the thing—it will always remain a fact—it always has been, and it can never be changed. A man may rely forever upon it.

Guess-work is most unfortunate. It is blind work, and the farmer is groping his way in the dark. He casts his seed at a venture; and we see the results of his venture. If nature has favored him with a rich soil, he will prosper for awhile. Then comes the dilemma, the distress, in consequence of "going it blind." It is true, he will acquire experience in his blindness. But why not emerge into daylight at once? The dawn has arrived. We may see facts and possess ourselves of them. There are men who do it. Is not that encouraging? If they do it, why not others, you, we? But it is so hard to get out of these old ruts of farming. Besides, we are "so poor," have "so much work"? All excuse, depend upon it. Cannot a man read? Yes, every man. Let him inform himself, then. In what? In agricultural knowledge, which the best agricultural papers furnish him. Is he not aware that there are also books on agriculture? Any man of intelligence will tell him that, and name the books. This will give him the theory. We know scores who have thus acquired agricultural knowledge. Then comes the practical. His reading will tell him where the best implements are to be had, and the use of them. It will tell him how to secure the best breed of cattle, and how to treat them. It will tell him about the rotation of crops (a most important point), and of the proper application of manures.—Most of all he will learn what are the fertilizing principles of soil. There are a hundred more things of minor importance that he will learn. Then he is to secure his implements, his stock, &c. Here comes up his excuse, "it will cost money, and I haven't got it." This only shows what a state he is in—that he commenced wrong, as nine-tenths of the farmers do. Well, what is the remedy? A remedy he is not apt to apply, unless he has the true spirit of a farmer. Change his course. Possess himself of less land. Farmers generally have too much land. To do this may be very inconvenient. There is no help for it. He will soon find that half the land he possesses is much the most convenient; much the easiest to manage. Here is the fault, we begin on too large a scale. It must be a hundred acres, or five hundred—or more; and the man, with hired help in summer, must do the work alone. One man to a hundred acres! Is it a wonder that land is not better cultivated! "Fifty acres is too small a farm; it cannot be thought of"—when twenty would be more advantageous; yes, ten. We have known five acres yield more profit than a hundred—where land has been skinned, and weeds choke the grain; where the hand rake and the cradle do the work, and horses tread out the grain; where part of the stock dies in the winter, the rest starved so that a summer's feed will not restore them; where manure is wasted, and the same crop is continued from year to year, till a man has the straw for his pains. We have known a half dozen acres yield nearly as many hundred bushels of corn, when, on the other side of the fence, ten acres, with an immense amount of bad labor, yielded a quarter the amount: an average crop of the farm. Here labor is thrown away; anxiety and bad temper are engendered; the stock as well as the soil is impoverished and abused, and the man prematurely worn out; compelled, perhaps, to sell his farm, and die a poor man. So much, where there is too much land, and the one man is bound to do the work himself.

Such a man should dispose of his land, and buy less; or sell part of it, according to circumstances. Then he will be ready to purchase implements and improved breeds of stock. If not—but there is no *not* about it. He must not have too much land. We mean the general farmer. There are exceptions. We mean particularly the beginner, or the man who has been worrying his land for several years in the manner above mentioned.

But manures must be applied. "The manures! ah! there is more labor." Yes; and while you are doing it you have the consciousness of knowing that you will be certainly paid for it. It is this kind of labor that we wish to enjoin upon the farmer; the labor that is sure of remuneration. It then becomes a pleasure instead of a pain, as heretofore; a stimulant to action.

"But all this labor is too much for one man." Then lessen your land, and you will lessen your labor. Keep within your means; but what you do, *do right;* in the way we have endeavored to prescribe. A large farm requires many hands and much capital. If these are wanting, act within your means.

We have now in our mind's eye several snug little farms of from ten to forty acres, under choice cultivation, that it does us good to look upon. Fences are up; weeds are out; stones are removed; wet land reclaimed and made tillable; and—the soil—a perfect wealth of grain and grass cloud it each year. Such farms are green spots in a neighborhood; poems, real poems, that people, when they pass, love to read over and ponder. They are also lessons; very effective ones. Then life is so much pleasanter on such a farm, small as it is. It brings in large incomes with proportionately little labor, and that secure. Such a man is a blessing, and not a curse, to the earth and to his neighbors. The birds check their flight at the sight of such green fields; and we have seen the traveler take off his hat to them. With such a plat of earth for a home, a man need not be ashamed. He sleeps well over such fences, such pastures. Drouth does not afflict him, nor long-continued rains. His stock withstands the cold as well as delights the eye. He never loses any. He is proud of what he does, and happy; and his family is like him. This is living. It is not alone making money, although it is this effectually. It is enjoying not only the money, but the way of making it. It makes a garden of a farm. Think then of a whole neighborhood a garden; a town; a state. Why the thought is almost magical. And is it overdrawn? Not by any means. The time is coming when this will be realized. We may have only glimpses of it, isolate cases. But there will be those by-and-by that will see it.

BEE QUERIES.

Ed. Valley Farmer: I wish to ask some questions relative to the raising of bees; how to make them profitable to the raiser, and some plan of a hive to be bee-moth proof, as they are a great pest to us here; also, the most reliable works on the subject?

2. When is the best time to sow clover seed, as the sun kills a great deal of it about August?

3. When is the best time to sow buckwheat and cut it. How much seed per acre?

4. What are the latest improvements in the manufacture of Sorgho and progress of sugar making.

John C. Farrar.

Perry Co., Me.

STEAM CULTIVATION.

BY COL. C. W. SALADEE, OF PADUCAH, KY.

NO. VI.

Ed. Valley Farmer: The next thing our subject suggests, is a consideration of the character of the work to be done by the circular system of steam cultivation already described, as compared with the old system of draft cultivation. This done, our next and last duty will be a solution of that question which all new projects and enterprises—no matter how dignified, how important or desirable—must condescend at last to answer—viz: *Will it pay?*

Improvement is, or ought to be the primary object of invention. But the inventor's high calling has been, alas! too often disgraced in these latter days by that class of pretenders who invent, but fail to improve; and who devise novelty, but omit utility. Because a thing is new or novel, is no evidence of its being either practical or desirable. It has, I know, become fashionable with many persons to accept it as a rule, that "wheresoever novelty exists, utility exists also;" when the fact is, that but too many of our modern improvements are no improvements at all—being simply alterations from good to bad. Hence, so many improvements upon things in which no imperfection was ever visible.

We must, first of all, discover a manifest imperfection in the thing we propose to improve, before we can reasonably hope to make a really good invention. Our inventions may, it is true, prove to be novel, and yet be void of utility; they may effect alterations, yet not improve the things altered. The physician who would administer medicine without first discovering disease, could not be reasonably expected to improve the physical organization of his patient. So the inventor who attempts to improve without first pointing out a manifest imperfection in the thing to be improved, could not be expected to gain much advantage by his invention.

Applying this doctrine to the case under consideration, let us inquire whether there are any manifest defects in the old straight draft plow, or in the work it turns out. And if defects shall be brought to light by such an investigation, let us see how or in what way the circular system of steam cultivation is to obviate the difficulties presented, and what is the character of the work done.

First, then, what are the manifest defects, if any, in the present system of cultivation?

This is best answered by pointing out what

past experience and the dictates of agricultural science show to be requisite in order to produce the best possible result the soil can be made to yield to us; and then to inquire whether those points can or can not be attained by the use of the old plow.

"Deep cultivation" has long since been discovered to be the grand secret of success in farming. This is particularly the case upon prairie lands. The prairies of our country, and especially those of Texas, require a deeper cultivation than cleared timber lands, for this reason—they are exposed to the two extremes of wet and heat, to a greater extent than timber lands; and hence the surface of the ground to a depth of from 4 to 7 inches, has been comparatively deadened. This is the case to some extent with all prairie lands, but more especially with those of the extreme South and of Texas. There we have the "rainy seasons" which are protracted through nearly the whole winter, and which are followed by the extreme heat and drouth of the summer. The united action of these two agencies upon all low prairie land lying in a state of rest for a number of years, will have the effect above stated. And it is a mistaken supposition that some process of manuring is necessary to make this character of land work pleasantly and produce abundantly. It can be *reclaimed only by deep cultivation.* I base these remarks upon actual experiments in which I, with other gentlemen in Texas, was engaged, and which resulted in showing us that if we could plow up those prairie lands from 12 to 15 inches deep, we should find that the soil would not only work pleasantly, but that it possessed all the properties requisite to the best and most productive land in the world. We found also that from this character of plowing we derived another very important advantage: viz., that crops could be made with very little rain, and under some circumstances without any at all.

The theory of this is thus explained: If, in the fall of the year, those lands could by any means be broken up from 12 to 18 inches deep, they would retain enough of moisture from the over-abundant rains of the winter, to make an excellent crop without one drop of rain in the ordinary growing season.

This fact was fully demonstrated by actual experiments made by myself and Ex Lieutenant Governor Lubbock of Texas, which we commenced in the fall of 1859. Each had a plow constructed of the requisite proportions to plow 12 inches deep, and which we accomplished at an extravagant cost of animal power. The results were as follows: My 3 2-10 acres which were in one corner of a 35 acre field, planted at the same time as the remainder of the field, in corn, produced 45 bushels to the acre, while the balance of the field—in consequence of the drouth that season—produced 20¾ bushels to the acre—the plowing being about 4½ inches deep. Lieut. Gov. Lubbock, from 1¼ acres, plowed 12 inches deep, produced 68½ bushels of corn, while the remainder of his crop plowed 4 inches deep, was next to a total failure.

But it is a fact well and long established, and is applicable not only to Texas, but, in a greater or lesser extent, to all agricultural regions, that if, by any means, we could cultivate, especially our prairie lands, at an average of from 15 to 18 inches deep, we could vastly improve the land, and materially add to the quantity of its productions.

But how is this point to be attained?

Surely the old plow can never be made to disturb the earth at this great depth. And while its inability to perform for us such an important service is fully proven and admitted, this venerable old servant of our fathers stands charged also with the malicious crime of "inflicting a positive injury upon many of the soils he is made to work." And this charge, too, is established by abundance of proof. The evidence of witness *Subsoiler*, alone, is enough to convict him of the crime charged; the very existence of this witness is a standing commentary on the mischief done by the plow. It damages the sub-soil, which is bruised and hardened by the share, in exact ratio with the weight of soil lifted, *plus* that of the force required to effect the cleavage and the weight of the instrument itself. But supposing the depth of 12 or 15 inches could be attained by the use of the straight furrow plow, its tendency to press and crush the pores of the sub-soil into one hard and impenetrable surface, still remains a seriously objectionable feature in it.

The *inability*, therefore, of the old plow to give us depth of cultivation, so absolutely requisite upon our wide spread prairies, and the imperfect quality of the work it performs, as the result of the injury it inflicts upon the sub-soil, suggests to us, in a most forcible manner, the necessity of applying steam to a circular system of cultivation in such manner as to give the depth as well as to avoid the injurious effects of the drag plow; and, at the same time, to leave the ground it passes over, in as fine and perfect condition as a garden bed can be made by the use of the spade and rake.

The reader will understand, if he remembers the description I have already given of the rotary steam plow, that the weight of the plows is sustained and carried by the machine, while they are revolving through the ground, and thus most effectually relieving the bottom of the furrows, or the sub-soil, of the disastrous pressure which is inflicted upon it by the ordinary drag plow.

Hence, if for no other reason than this, the quality of the work done by the rotary system is infinitely superior to that done by the drag system.

But the quality of the work done by the rotary system described, is materially enhanced by the fact, that the depth of cultivation required and a complete pulverization of the soil, is also attained.

To claim that by this rotary system we may as readily plow two feet deep as to plow six inches deep, might, in the eyes of many, have the appearance of that class of expressions belonging only to persons of doubtful sanity; but such an opinion formed of the writer by any of his good readers, will make the assertion none the less a fact. And when once the principle by which it can be accomplished is fully comprehended and understood, the only surprise the reader can feel is at its extreme simplicity.

The long and universal employment of the drag plow has permanently fixed in the public mind the idea, that plowing cannot be done but in the one old way; therefore, when it is stated that we have discovered a means of plowing two feet deep (if that is necessary), the old drag plow idea is very naturally associated with the performance of such a feat, and the impossibility of doing it in that way of course presents itself, and is offered as an undeniable evidence of the fact that the thing *can't be did*. But let the mind first be divested of this old notion of plowing, by presenting the idea that this apparently miraculous feat is to be performed by an entirely different process, and upon a different principle, and you are then prepared to give the inventor thereof a hearing, at least, before writing him down a fool.

We may plow two feet deep by giving the plows a circular direction in place of a straight one. To plow at this depth on the drag system, implies that the plow must be of huge proportions, and set in the ground the depth it is to be plowed, and burst up the unyielding soil by main strength and awkwardness." This would of course be impossible. Now the rotary system of plowing materially differs from this.—While each plow is made to go the depth of, say, two feet, it is not compelled, however, to take two feet of the ground it is passing through—it really takes but six inches of ground in its circular course, and yet cuts at the depth of two feet.

In drag plowing, you insert the plow to the depth you wish to break up the ground, say six inches, and you direct it in a straight course over the surface; in rotary plowing, you direct the plows in a circular course, working, as it were, against the end of the soil, each plow reaching forward, say six inches, at each revolution, and takes but that proportion of ground clear through its downward circular course.

You will now understand, I hope, that by this circular direction the plows may go two feet deep, and yet each plow cut but 2, 4, 6, or 8 inches of the ground at each revolution.

The plowing done on this principle, and followed by the rotary harrow, in the manner before described, will leave the ground in as perfect condition as it can possibly be desired.—By this system of cultivation, we most effectually obviate the tendency to inflict that injury upon the sub-soil of which the drag plow is so notoriously guilty—we gain the all-important advantage of depth of cultivation, which cannot be attained by the use of the drag plow;—and last, but not least, we give the soil a degree of pulverization not to be acquired by any other known process of tilling the ground.

The result of all this, is, that the character of the work done by the new system of cultivation, must be infinitely superior to that done by the old drag and draft system.

I shall conclude this series of papers by a consideration of the subject in a pecuniary point of view, in my next and last article.

Ashland Farm, Ky.

Timothy is a delicate thing to be managed by the farmer. It differs much from the other grasses. Cut when in blossom (as it should be to make good hay), it will die—i. e., the root and tuber will. It is carefully proved, by Dr. Kirtland, in Flint's Book on Grasses and Forage Plants, that Timothy should be cut when the seed is matured—not ripened, but full grown. The stalk near the ground then becomes dry: then cut it, and the tuber will not die. If cut when green, new tubers will branch out, and the winter will kill all. So when fed off: hence, Timothy will not do for pasture, as it will last but one year. The next year some other grasses or weeds will occupy its place, or the ground will be naked.

FALL PLOWING.

The most bigoted farmer will admit that fall plowing is beneficial. You cannot convince him to the contrary. He is as stubborn in his belief as he is against book-learning. Whatever errors he may possess generally—and they are numerous—his experience of fall plowing is right. He knows that the frost makes the turned up soil mellow: he knows this as a fact, as he has had abundant experience. Hence, fall plowing is practiced extensively, not only by him, but by all, or nearly all.

Yet this bigoted farmer, who has luckily hit upon a good thing, carries the matter too far. We are all apt to digress here. *Fall plowing is good only for stubborn soils.* For sand or gravel it will not do. For clay it is just the thing, or for any soil containing clay, or any lumpy soil.

And the later the plowing is done the better, if the ground is not too wet. It may be moist or even wet, but should never be muddy. Avoid mud in all places and at all times. Avoid it in the fall as far as you can. To plow late is to prevent the grass from starting towards the surface, and leaves the soil comparatively loose and thus the better fitted for the penetration of the frost. To "stand-up" the furrows, as some plows are said to do, though considered a fault generally, is here just the thing. The more points or ridges that are presented to the action of the elements, the better—thus leaving a sort of hollow condition of the plowed ground, not only that the frost may work in, but the water pass off, leaving it comparatively dry in the spring. In the soil thus exposed to the action of the frost, many weed-seeds are frozen to death; bugs also and their larvæ share the same fate.

If plowed early, the ground will become more or less compact, preventing the water from draining off and the frost from penetrating as effectively as it would otherwise. Besides, the grasses and weeds will get started and show in the spring, making a compact grassy soil, just the thing unfitted for a crop: and it requires plowing over, with a *muddy under-soil*, which cannot be endured for a moment, as this will give you a brick-baked surface, and the effect will be visible for years—the ground will receive almost fatal injury. There will be lumps for years; and the frost cannot restore them, nor the clod-crusher. The combined action of both, with the aid of the sun and the rains and the snows, together with lime and other appliances, and time—these are necessary to overcome the injury which an injudicious handling of the soil has caused.

Set up the soil, then, and make it as porous and hollow as may be; and plow it as late as can be consistent with the late rains of autumn—and in no case plow again in the spring. Sandy or gravelly soil may be plowed in the spring, in fact may be plowed at almost any time, and as often as one pleases, always avoiding excessive wet.

This hollow or porous condition of the ground when plowed as we have recommended, will also favor the application of manure. Manure thus plowed under will get the action of the elements, and add wonderfully to the productiveness of the field; will improve the mellowness of the soil, and, in a word, will be just the thing for all kinds of grain, corn, roots—everything.

We have never seen better fields than those treated in this way with manure—mellow and productive. Thus, rigid soils; cold, clay soils, may be redeemed. And it is difficult to redeem them in any other way.

SHOOTING BIRDS.

It is difficult to restrain one's-self sometimes from taking the gun and popping away at robins and other birds. They will so eat the cherries and the bees, and our nicest raspberries have their best fruit carried off by them, for they appreciate the best fruit—will never eat a currant if a cherry can be had. They are very troublesome. So far as currants are concerned, nobody cares. They eat few of them, and currants are generally plenty. As to cherries, they eat them almost gluttonously. They will soon strip a small cherry tree, if let alone. Let us look a little into the matter.—When cherries are plenty—as they are some years—the birds will affect the crop but little, as they can take but comparatively little. When the crop is poor, as is the case this year in most parts of the country, they destroy much fruit, comparatively, as there is less than in a fruitful season. But what fruit do they destroy? Worm-infected fruit—fruit not fit for a family to use, as that is the prevailing fruit in a poor year. They are pretty sure to destroy the worms as well as the fruit, which is not generally done by the family; so that, after all, the birds do not so much harm as we thought. Besides, before the fruit is ripe, all the forepart of the season, they live on insects, and to do this, they must destroy an enormous amount. But they are slaughtering insects the whole season through, the fruit coming in only as a dessert. Save, then, the birds for your own benefit.

THE BEE COLONY.

Bees should be considered as members of the family, and then there will be attention. Without it, the owner is apt to neglect them; and a colony of bees is like a family—when neglected, they are not happy, and when not happy, they are not apt to do well.

There must be daily care taken during the spring, summer and autumn, and in winter they must not be neglected. Otherwise bees will not do well. There is no such thing as luck. Depend not upon it, or you will be disappointed. Neither depend upon the good years alone. Depend upon yourself—the love you have for your bees. The great apiarists are all lovers of bees. This gives them attention, for where one's heart is, there is apt to be his attention. To raise bees to make money, is not the true motive. If this motive is governed by the disposition we have instanced—a relish for the thing—there is little doubt of success where the man has fair abilities and a good temper, for a bad-tempered person is apt to infect the bees. Some men, on the other hand, are at home among them.

Thus we see that it is not every one that is calculated to keep bees, no more than to keep school, or preach, or write poetry. You must be the master of your bees. They are accustomed to a queen, you must be their king, their overseer, their director—in which case they are pretty sure to have clean hives, good location, enough food (in winter), and are all kept at home—none flying away—and no robbers, that is, none robbed; for the careful man will see that the weak swarms are protected, which is so little appreciated generally. To protect your swarms, close the entrance, so that but one bee at the time can enter, leaving the hive slightly raised for air. In such a case a swarm can protect itself, unless very weak, so weak as not to be worth keeping. Of course there is only danger of robbing in the fall and spring—perhaps most in the spring, when there is lack of honey to gather, which is apt to make the industrious bee vicious—the only thing that we know that will do it, and that grows out of his good quality, a desire to be useful. Now, a humane man will see that his weak swarms are not overpowered by the strong ones. Simply close the aperture so as to admit only one, and you are safe, unless your swarm is not worth saving. But it must not be done after the bees have commenced robbing (which they surely will if they find out a weak swarm), but before. Still the thing may be remedied after the evil has commenced, but not so well. Prevention here is better than cure, as usual. Thus a few weeks have to be spent in the spring and fall in watching swarms in this respect. The weakest swarms (if quite weak—if people will persist in keeping them), must not be left open, save as we have indicated.

Another thing. The true apiarist will see that his bees do not lack for honey. They are not left to take care of themselves; for the vermin, the cold, the heat, the wet, have a good deal to do with your bees—the very finest included—if you let them. How many fine swarms are lost: something ails them. But the owner—not the keeper—knows not what it is. Of course he does not, neither does he care, or he is too lazy. Such men enter upon bee-keeping, thinking the bees have to keep themselves, and lay up money besides, make men rich by their independent labor—that the man has merely to go there

Take his honey,
And get his money.
(Isn't it funny?)

And think it a hard job that he has to do the hiving and make hives in the bargain. As for finding a cover for them in the winter, that is out of the question. By some hocus pocus miracle they can stand any frost, they are used to it in the woods. And such men will find fault that they cannot keep bees at a profit. Will the reader keep bees? Is he fitted for it?

School District Reports of Agriculture.—We now and then see an account of the number of acres of the various grains in a school district or neighborhood, and their produce. This is interesting to the true farmer. And it is certainly instructive. Now, it is not difficult to get at such matters. It will have the effect of increasing inquiry and productiveness. It will also get up the habit of order in farming accounts. It will do much good. The quality of soil for each grain, with the rotation of crops, should be given. Many things that seem to be trifling, will be of benefit. Make a full table of the farm, orchard, dairy, &c. It will be an excellent table to keep from year to year, and to make comparisons. We must get up interest. Interest is the first thing toward improvement. Who has enterprise enough to lead in this matter?

Happiness is within us, and not in the things about us. So it is with the beautiful. What is beautiful must be so considered from a principle within. Beauty differs in different nations, as well as happiness. So does man in his cultivation.

SOILS FOR MEADOWS.

Clover and Timothy for dry soils; other grasses for moist. Too dry, however, will not do for Timothy nor even for clover, nor indeed for anything. The grasses generally look for the dew and the rain, rather than for natural moisture in the soil, that is, an impervious sub-soil, or springs constantly watering the ground. There is nothing equal to rain, or irrigation, when properly timed. The difference is, that some of the grasses require more than others: that is all. The farmer, who has an eye to the right thing, will raise his clover on his hills, and cut two crops of it for hay. His pasture will be on the lowland, in the most moist portions. Clover put on a hill and plastered, will, even if the soil be comparatively poor, do well. Nothing for the outlay will bring him so much in, perhaps. For growing stock—young stock—wet pastures are not so good as the nitrogenous or flesh-making principle is lessened in such soils, and hence the grass more or less deficient.

ORCHARD GRASS.

This grass is not generally appreciated. It grows rank, too rank for hay, as the stalks when fully grown are coarse. But it has one quality which recommends it, it starts up quick, quicker, perhaps, than any other grass that is known. When fed off, like June clover, it starts up at once, only much more rapidly.—It grows in tufts, and has, for grass, broad leaves, forming knots of roots and stems, that give it the appearance of upraised soil. The scythe is often stopped by these tufts. They thrive best in moist soil, but will stand drouth from their long superior roots. The whole season through they retain their verdure: the earliest in the field and the latest. The first few warm days quickens them into greenness, somewhat coarse, but tender. In the fall they are less rank, and afford a softer herbage. These tufts should never be permitted to show their stalks, they are hard and harsh, containing a good deal of silex. When thoroughly covering the ground, they exclude all other vegetation, by their rank, tough root, and rapid growth. A man might as well plow a prairie lot as an inveterate field of orchard grass. When sown very thick, it is with difficulty the stalks come forth, and but few from a root under the most favorable circumstances.

It will thus be seen that this grass has some things to recommend it, of which the discriminative farmer will avail himself. We have never seen it in large fields, only in spots, and mixed with other grasses. It always shows a head and shoulder above the other grasses. It is almost a miracle to see it start up after the scythe has left the field. Of course, it lacks refinement of juices, but will do when other herbage is scarce, as it will grow early and late under almost all circumstances.

TIMOTHY AND CLOVER.

It will not do to grow Timothy with clover, and cut as hay, as the Timothy must be cut before it is sufficiently mature to save the root, or else the clover will be too ripe for good hay.

Farmers who grow the two together, will remember that when the crop is cut for hay, that the next year the ground is barren—sometimes the clover only remaining if the frost spares it. This is in consequence of killing th Timothy by cutting it too early. Timothy should only be grown for hay—and that for horses, as for horses' feed, it can be cut when fully mature—not ripe; but for cattle would be too mature. The point for cutting is a nice thing. Dr. Kirtland says it should be cut "as soon as the process of nutrition is completed," which "becomes manifest by the appearance of a state of desiccation or dryness, always commencing at a point directly above either the first or second joint of the stem near the crown of the tuber. From this point the desiccation gradually progresses upward, and the last portion of the stalk that yields up its freshness is that adjoining the head."

This is a very important point, especially to dairymen. It has never been fully understood till now. The discovery throws much light on what was a sort of mystery before. We have known drouth and frost to kill Timothy; but we never before knew so exactly why.

HIVING BEES.—Our most successful beehivers begin to hive a swarm as soon as it begins to settle, and not wait until all have lit. These men will have a swarm hived and the hive on the stand before other people have begun to hive. When those first clustered are shaken into the hive, the rest will be disposed to continue to settle on the place where the others were shaken off. By shaking the limb occasionally, this (says Quinby) can be remedied, and they will all draw into the hive, attracted by the sound.

A cheerful moment is a grain of gold among the sands of life.

Laughter and tears are the sunshine and rain of life: both necessary.

CLEAN FIELDS.

How many fields do we meet with that are entirely clean? how much grass that is pure grass? particularly how much grain?

Corn is pure, as a crop; so are gardens. But is the land free from weeds, &c? We all know that the cultivator and hoe are necessary; not for grass alone, but weeds. There is scarcely any grain sowed pure. How, then, can land be kept clean if foul seed is sown on it? This accounts for the wilderness of weeds that meet us on every hand. Some of the richest farms are over-run, for weeds love a good soil.

And all this is owing to carelessness. We have seen a few fields of pure Timothy, and a lot or two of grain. We involuntarily stood still at the sight; for in each case the crop was also a heavy one. A man that will keep his fields clean, will have them rich and productive.

Weeds can be eradicated by thorough working of the soil, exposure to the frost, &c. The thing, however, in most cases is difficult. But all this is work for nothing if your seed is not kept clean, absolutely clean. When once purified, both soil and seed, there is no difficulty in getting along. Sometimes your neighbors' fields will annoy you, but not seriously, for all seeds do not take wings and fly away.

The true way is to have the whole country move in the matter. That would make thorough and speedy work. But we fear this will never be done. Then let each farmer take care of his own domain.

What will he gain by it? More grain—for the weeds then will be grain. But this is not all. Such a man has the consciousness of having done a good deed, showing a good example, and making money—more than otherwise. Our fanning mills are now so perfect, that there is no excuse for sowing dirty grain or seed. If your fields are stocked with weeds, clean grain will not add to them; foul seed will. Sow clean grain and seed at any rate.

When to Cut Timber.—Will the question ever be settled when is the best time to cut timber? Perhaps after all the inexperienced have learned. Winter is the time that people usually select to cut their timber: winter, fall and early spring, but never summer. Ah! but some will cut in the summer, and when all the work is to do. They do it from a matter of deliberate judgment, and they are right, always right. The sap of the tree is part of the tree, and when the wood is dried with the sap in it, it becomes hard and tough, more compact than otherwise. When cut in the winter, the sap (of soft wood especially) will partly rot the wood before it gets dry the following summer. If dried at once, when cut in the winter, the thing would probably be different. If timber is perfectly dried before affected in the least with rot, it is remarkable how much weather it will stand—even a bass-wood rail in this condition will outlast ordinary hard wood rails.

MOISTURE IN SOILS.

It is the *invisible* moisture in the ground that is taken up by vegetation. Hence, a moist, not a wet soil, grows our best grasses and grains. It is therefore in a drouth that we are often surprised at vegetable growth, at a loss to know where the water comes from to daily keep our trees and plants—not only from drying up, but in a growing state.

It is proved that a single stalk of corn will give out in 24 hours, in a hot day, three pounds of water. Where does all this water come from? From the atmosphere, what is not retained from the great body of the previous moisture; for soil, mellow soil especially, will absorb moisture readily from the air, which always in our climate contains it. The mellower the soil, the more finely reduced, the more moisture is taken in. The richer soils also absorb much more rapidly than others. This accounts for the advantages of manure and cultivation—pulverizing the soil.

Working Ground in Time of Drouth.—A thoroughly mellow soil needs no stirring in a drouth, nor at any other time during the summer. Particularly in a drouth it should be let alone. The top, which then is always dry, by being worked under, will absorb from the moist soil it comes in contact with, making it the drier, while the under moist soil brought to the top will dry out.

Where there is much moisture in the atmosphere, this is somewhat remedied, especially if the soil is rich. But where the ground is hard and not so rich, as is often the case with poor soil, the soil cannot be too much worked. The more it is worked, the finer it will get, and this pulverized condition is what is wanted. It is of less consequence, then, to work a rich, mellow soil, than a poor, stubborn one. As most soils are in this condition, take the country at large—culture, a thorough pulverization of the soil, is what is wanted. Keep the weeds out of your perfect soil: do no more to that—in a mechanical sense. Of course, irrigation in a drouth is necessary.

The wisest men were once as ignorant as any.

INCREASING SOIL.

By deepening the cultivation of your soil, you add to its quantity. Thus, by having your soil eight inches deep, where before you had it only four, you double its capacity—somewhat as though you had two acres now where you had only one before. Did you ever think of this? Eight inches of cultivated soil has double the strength of four. This is a new way of increasing your land—not new to our best farmers, who understand all this—and hence they cultivate deep—not deep at once, but gradually, each year a little deeper, or at every plowing. Plowing alone makes the soil mellow, has a wonderful effect, even without manure; but manure, it must be remembered, is the main reliance always.

In deepening your soil, judgment is required. Not too much of the raw sub-soil must be brought up at a time, unless it is rich—then plow deep. In clay soils, little at a time is the true theory. Cut off half an inch of clay, more or less, at each plowing. This, thrown up to the action of the elements, will be reduced to powder, and it at once goes to work drawing strength from the atmosphere—clear profit you see; it has the effect of plaster. Then it is a manure in itself. These heavy clay beds are valuable beds of manure. As they are generally spread out with your soil, you need only to adjust your clevis-pin to manure your ground. But this must only be done when the super-soil is thoroughly friable, in good cultivated order. Too much clay brought up will stiffen your soil; and air, and heat, and rain are kept out; and thus it remains, stiff, cold, stubborn soil, on which little or nothing can be grown. Grass is the only thing that stands the least chance.

Draining.—People begin to understand that clayey soil requires shallow draining—say, two to three feet deep. But the drains must be closer together. The shallower the top-soil, the shallower should be the ditch, and the nearer together the drains. In porous soil—that is sandy or gravelly—deeper ditches and further apart will do. Even then depth may be carried too far. A thorough drainage is all that is required. More, is expense for nothing. Drain wholly according to the condition of your soil.

The Secret of Farming.—"My farm is overflowing with plenty, and promises a grateful return for drainage, deep tillage, plenty of manure, and irrigation."—[*Alderman Meehi.*

Run Your Plow a Little Deeper.—This is generally good, and should, therefore, be practiced. Where the undersoil is apparently of the same quality as the top soil, set your plow one or two inches deeper. The land however should be plowed in the fall, so that the frost may have its effect upon it. This often is enough.—Plowed in the spring, there will be an improved crop, especially where the soil is rigid, and the under-soil being less exhausted, and mellowed by the action of the atmosphere, an improvement takes place by merely plowing a little deeper; but in the fall, always in the fall, if the ground is to be sown in the spring. For spring wheat, plow in the spring as soon as the ground is well dry. The sun and rain will be a substitute for the frost. But, at any rate, plow deeper—even where there is clay. This, however, must be done in the fall. Frost is indispensable to clay. This must be mixed with the general soil in the spring, either with the harrow or cultivator; or, if considerable clay is brought up, plowed again. Clay, it must be remembered, is manure, but not prepared manure. The atmosphere is necessary to this, and may be aided by other manures (which have a decomposing effect), by lime, &c. Run your plow a little deeper for the next several (first) plowings.

Fertilizing Grass Lands.—Lime is an excellent fertilizer for most of the grasses; and as their roots keep near the surface, the lime should alway be harrowed in instead of being plowed under. In other words, keep the lime among the roots. For clover, it must be mixed with the soil throughout; and then you may rely on heavy crops.

Lime on Some Grains.—For rye and barley there is no manure so good as lime. It gives plumpness to the berry, and strength and brilliance to the straw. For wheat it is not so good; worse, if anything, for oats—this, however, only on light soils. On heavy, rich soils, lime increases the growth of perhaps every vegetable production—increases it, not as a direct fertilizer, but by giving heart to the soil, by acting chemically upon the other fertilizers—upon the soil generally. The more manure that is used on unlimed soils, the more lime should be added, for lime (always remember) is a corrector as well as a fertilizer, and when there is no manure to act upon, it will act (chemically, injuriously,) upon the grain.

How to Thwart the Cut Worm.—Wind a piece of paper round the stem of the plant at the ground, having it extend up about an inch, and into the ground the same distance. In such case the worm cannot touch your plant. Cabbage thus treated is perfectly secure. It should be done when set out.

Sheep Husbandry—Breeding In.

One of the greatest evils connected with the culture of sheep is the custom of breeding in. It is a law of nature, as well defined as that the needle points to the North pole, that the mingling of kindred blood will produce degeneracy and disease. In all civilized countries this principle is so well understood and recognized, that laws are enacted to prohibit marriage between kindred. On the other hand, it is a well established fact that the greatest races of men the world has ever produced, have sprung from an intermixture of remotest nations. England may be mentioned as a striking illustration of this theory. The great historian, Macauley, says: "Early in the fourteenth century the amalgamation of the races was all but complete, and it was soon made manifest by signs not to be mistaken, that a people inferior to none existing in the world had been formed by a mixture of three branches of the great Teutonic family with each other, and with the aboriginal Britons." The rapidity with which our own country has progressed in the scale of nations, may reasonably be attributed to a mingling of races, while China, Japan, and other countries, that have for centuries refused to commingle with other nations, are strong proofs of the degeneracy that naturally follows such a policy. In the animal kingdom it is well known that all the superior breeds are the result of "crossing."

The thorough-bred horse, the great breeds of cattle, sheep and other animals, are so conclusive proofs of this principle that not a word of comment is necessary. The same principle applies to the vegetable kingdom, where all the great improvements in variety are the result of the mingling of different elements, while the planting of seed in the ground from which it is raised, is believed to be the principal cause of the numerous evils that beset the cultivation of the soil, such as the rot in potatoes, the weevil, smut and cockle in wheat, &c. Some eight years since, it will be recollected that the wheat crop of Ohio was destroyed for several years in succession by the weevil. This result is believed to have been caused by sowing wheat on the same ground from which it was raised, as it is well known that this was the practice in Ohio, at the time referred to. Finding their crops destroyed, the farmers came to the conclusion that the particular variety of wheat which they had been raising had "run out," as they termed it, and sent to other parts of the country for seed wheat. The impression became very general that the Mediterranean wheat was not subject to being destroyed by weevil, which was true, simply, for the reason, that it was a new variety, and had been but a short time before introduced. It had therefore not been bred-in-and-in, as that which was destroyed by weevil had been for years. Any seed wheat brought from other States would, no doubt, have proved equally beneficial as the Mediterranean. We heard a gentleman from Ohio, a short time since, extolling a variety of wheat brought from California, which had proved wonderfully productive, and free from the evils we have mentioned. If the farmers of Ohio will send to California, Maryland, Michigan, New York, Minnesota, or any other distant country, every year for their seed wheat, they will in our judgment find themselves relieved from weevil, and from many other evils to which they have been subject. We noticed a short time since an account of disease having been developed in the silk worm in France to such an extent as to seriously threaten the destruction of the silk crop. The remedy proposed for this evil is suggestive of the sound philosophy with which the French people conduct their affairs. Their representative at Shanghai was directed to procure a large number of cocoons, and send them to his government, and by thus intermingling a new element, it was thought that the disease would disappear. It is plain from these facts that the disease among the silk worms was believed to have been caused by degeneracy, produced by breeding in, and there cannot be a doubt that the remedy proposed will prove effectual.

Nature left to itself, without the ingenuity of man in mingling varieties and crossing breeds, produces stinted growth and degeneracy in both vegetable and animal life. A few illustrations by comparison will serve to prove this fact.—Contrast for example the wild strawberry with the immense garden varieties—the wild plum with the Green Gage—the wild cherry with the Oxhearts—the crab apple with the Belleflower and Golden Pippin—the wild pear with the

Bartlett and Virgaloo—the wild peach with the Clingstones and others—the wild rose with the Moss rose.

In the animal kingdom, contrast the wild cattle of Texas and Mexico with the Alderneys, the Durhams, the Devonshires, and others—the sheep of Mexico and South America with the Southdowns, the Merinos, the Leicesters, and Cotswolds—the wild horses of Mexico and Indian pony of our own country, with the Glencoes, the Eclipses, the Herods, the Bostons, the Fashions, the Lexingtons, the Patchens, Flora Temples and Idlewilds.

It is the mingling of different elements that produces the healthy and vigorous growth, both in the vegetable and animal kingdoms, and this principle cannot be too strongly adhered to by wool-growers, as disease is sure to accompany degeneracy; and degeneracy, it is believed, is sure to follow breeding in. We are aware that in expressing this sentiment, we are treading on disputable premises. Hon. H. S. Randall, whose writings on the subject of sheep husbandry have a well deserved and widely extended influence among intelligent wool growers throughout the country, declares that "it is by no means true that it is either unsafe or improper to interbreed animals of any degree of relationship." He also says, "A majority of the most celebrated breeders and improvers of English cattle have been close in-and-in breeders." Such testimony from so high authority is entitled to great respect and consideration, yet we cannot believe but that the great cattle breeders referred to attained their success mainly in crossing the breeds. After having produced a distinct breed through the process of crossing they no doubt bred in-and-in to a considerable extent to preserve it, but without an occasional intermixture of new blood, we think the tendency would be decidedly in the direction of degeneracy, and in this opinion we are confirmed by Mr. Randall himself, who says, "There comes a time generally when close in-and-in breeding between the artificial species which have been partly moulded by man, produces loss of vigor and degeneracy, and sometimes this fatal overthrow is but one step away from the pinnacle of apparent success." In breeding sheep it is not necessary to keep constantly crossing breeds, but a frequent change of rams of the same breed, and obtaining them from flocks as remote as possible, with occasional crossing, is believed to be the most effectual method of keeping up the vigor and health of the flock. In England the growers very rarely breed from an ewe over seven years old, and never before they are two years old. By a careful selection of the breeding parents a constant improvement is kept up, and there is no country in which crossing breeds has been practiced to a greater extent or with greater success, as we shall hereafter attempt to show. The great object to be attained in our country, is to induce the farmers generally, and of the West in particular, where the facilities are greater than in any other part of the world, to try the experiment of adding sheep husbandry to their other agricultural pursuits It is not expected that they will enter largely into the business at first. In all new enterprises it is well to feel the way, and we recommend that those who enter into the business should, by all means, adopt the policy of avoiding in-and-in breeding. Its tendency is unquestionably to produce degeneracy, and by many judicious observers is believed to be the cause of rot, and many other diseases to which sheep are subject.—[*Ex.*

Animal Food for Horses.

It is a well known fact, that many years ago, in England, when an unusual amount of work was required from a horse in a short space of time, that it was a frequent custom to give the animal a drench of a quart of strong ale, and cover the bit with which he was ridden or driven, with a thick piece of raw beef steak, the juices of which, it was believed, afforded the horse a considerable amount of sustaining vigor. Whether this theory is correct or not is a mooted question; but in India a modicum of animal food has long been found of the greatest value in conditioning horses, and at the same time giving them wind, without affecting their training as racers, hunters, or as roadsters. The form of animal food administered, is mutton, the head of a sheep being selected. The method adopted is as follows: The head is boiled down to a gelatinous state, the bones taken out, and the jelly then kneaded with a sufficient quantity of bran or pollard. The horse will at first refuse to touch the mixture; he will sniff at it, that's all. The groom will then work the mixture thoroughly about, and between his grinders he will gradually work small portions about in his mouth and swallow them. In less than a week he will acquire the taste, relish it, and readily feed on it himself, when one head per day thus prepared should be given him, and half his oat or corn feed stopped. The same custom prevails in Persia, and in some other Eastern countries. We suggest the experiment of animal food conditioning as worthy of note and being tried.

In addition to strong beef, mutton, or sheep's head jelly, as above recommended, the following will be found an excellent recipe for jaded or over-fatigued horses: Take a quart of good, strong, sweet ale, break half a dozen fresh eggs into it, add two or three ounces of molasses, stir

the mixture well, and then give it to the horse as drench. He will soon grow to like it and take it with avidity himself. A relative of ours had a horse that no day's work was too long for, whose supper every night was four pounds of bread broken up, and a quart of strong ale poured over it, which he used to eat up greedily. An English exchange records the evidence of a contributor, who says: "I have a silver tankard, won at some west country races, by a broken-kneed, goose-rumped, cat-hammed cob we used to have, all through a drop of beer before starting, the only thing he had in the shape of preparation; clearly proving 'a spur in the head is worth two in the heel,' for he completely distanced his competitors in both heats of two miles, although they had the advantage of professional jockeys, and were considered properly trained coursers. This pony's wind was most extraordinary; give him a pint of beer and a pound of oatmeal, and you could gallop him twelve miles in forty-five minutes, in harness, up hill and down, without whip or force of any kind; and yet he was the most uncared-for of animals in existence. He'd be content to feed out of a pig's bucket, or any other man's platter. Nothing came amiss to him; and I believe half our horses are ruined by too great a sameness in living. Hay and corn, and corn and hay for everlasting."

From Wilkes' Spirit of the Times.

BLOOD LETTING.

BY GEO. SCULLY, M. R. C. V. S.

[Concluded.]

Blood-letting, when employed as a remedy in the treatment of inflammation of the lungs (lung fever), is supposed to confer benefit by lessening the heart's action, and thus diminishing the quantity of blood sent to the diseased organs, by that means relieving the air-acting apparatus, whose capillaries are of diminished calibre, either through inflammatory deposit or partial congestion, and as well through its impoverishing influence depleting the system of a large portion of its fibrin—a substance which sometimes exerts the most injurious influences in the termination of inflammatory disorders. These theories of the beneficial influence of blood-letting are plain, and seemingly much to the point; so much so that they were once universally accepted as truths, and are still to a great extent Certainly the cow leach of the earlier days of veterinary medicine did not understand the composition of the blood or its circulation; but he had peculiar ideas of quenching fever and withdrawing from his patient bad humors which existed only in his own imagination, to accomplish which he bled with a ferocity, an example which is religiously followed by some modern disciples of Vegetius in view of quieting an excited circulation, removing obstructions, and reducing the system. Blood-letting may be of service in relieving some of the vices of sanguinous determination, but in congestion of the lungs it is a remedy fraught with danger. This form of pulmonary disorder is, in most all cases, caused by a sudden change of temperature or the suppression of perspiration after work, either cause tending to expel the blood from the surface on to the ærating organs. Under such conditions the lungs become so much gorged with blood that the heart, though in close proximity, is not equal to the task of relieving them by its ordinary pumping action. The blood being the offending agent, it is the practice of many to have recourse to lancet. And what is the result? The congestion is not got rid of; the heart, whose action could have been augmented by the judicious use of stimulants, and by that means relief given to the over-strained organs, is hopelessly depressed, and death or inflammation soon follows. Physiology has been so long a branch of study in the schools of this continent, that it is hardly necessary for me to explain to American horsemen that the lungs are designed to present the blood to the influence of the atmosphere to undergo a chemical process which rids it of certain impurities contracted during its circulation; that they are adapted for this purpose by an arrangement of capillaries lying in contact with a numerous class of delicate and minute air-cells, through which the blood imbibes the element which enables it to depurate itself by exhalation. The cavities of the heart form two pumps—a right and a left—connected by vessels to the lungs on either side; one of those organic pumps receives the blood impure after its systemic circulation, and quickly passes it into the lungs, where the carbon, which gives venous blood its dark color, forms an oxide by chemically uniting with the oxygen of the air inhaled, and as a gas, passes off with the pulmonary exhalations. The blood is then pure, fit for the office of nutrition, and is passed into the heart's right side, from whence it is distributed over the system. This account of the blood's circulation only aims at simplicity, so that it may be understood by the mass. The constitutional disturbances consequent upon all great inflammations tend to augment more or less the circulation above the natural pulse, and it is this result of inflammation that has tended more than anything else to promote the universality of depletion. If the increased circulation was the cause, not the effect of inflammation, the phlegm would be one of the most potent remedies in the treatment of disease;

but the term so often used, "of cutting short the inflammation," is mere visionary language, for all inflammations have to run through their regular course, and though blood-letting may give temporary relief through its numbing effects on the nervous system, it cannot alter the laws by which inflammation is governed, nor will it lessen much the quantity of blood going to the seat of inflammation; for although the system at large suffer depletion, a sufficient quantity of the vital fluid will be directed from sound parts to keep up the morbific action wherever it may be established. We are told that the increased action of the heart and the diminished calibre of the pulmonary capillaries in lung fever indicates the free use of the lancet. But if the withdrawal of blood could be relied on to equalize the circulation, and thus relieve the diseased organs of an undue quantity of sanguinous fluid going to them, it would at once decrease the inflammatory action by depriving it of its actual food, and recovery would supervene in most all cases. But such is not the case, and I believe that blood-letting is on the decline amongst the thinking portion of the profession, for without conferring any advantages, it produces a host of evils, debilitating in a disease where debility is marked, rendering the absorbent system incapable of removing inflammatory deposit. It is likely to produce a low and lingering form of inflammation, which is but the precursor of tubercular deposit and consumption. But one of the worst evils of venesection, when adopted as a remedy for pneumonia, is its tendency to produce water on the chest, as a sequel to the inflammatory stage. For this result to take place there is no necessity for the pleuro to be inflamed, for the hydrothorax is frequently brought about when common influenza is subjected to the antiphlogistic mode of treatment. No doubt the general relaxation produced by the disease has much to do with this result; but the main cause, when the phlegm is used (pleurisy not existing), is the disposition to re-place with water the volume of blood taken away; by that means the blood's specific gravity is lost, which greatly pre-disposes the system to effusion.

In lung fever, the quantity of blood passing through the pulmonary organs, being more than they have a capacity for, it is reasonable to suppose that the heart's increased action, in place of being an evil, tends much to give relief. The increased action of this organic pump, is but adapting itself to circumstances that it may be able to relieve the over-charged organs which it could not possibly do if it continued its ordinary beat. If the heart's action be reduced by means of blood-letting or otherwise, it causes sudden congestion of the lungs, adding the primary stage of the disease to that at present existing. But as we well know that a portion of the pulmonary air-cells and capillaries are obstructed, and of necessity throwing double work on those less diseased, therefore it is very probable that by rendering the circulation sluggish, that we impair the remaining power to ærate the blood.

Bleeding from the toe is the most favorite mode of treatment for founder, and I apprehend that it derives its popularity from the fact, that most of the cases of founder that we meet in this country are slight, neither tending to mortification or disorganization of the laminæ, and requiring no other treatment than rest to bring about recovery. But let no one suppose that by taking a few quarts of blood from the feet that any inflammatory matter is drawn out. The farrier may present the blood to you some short time after it is withdrawn, in its jelly-like condition, and in his ignorance of the changes that fluid undergoes when exposed to the atmosphere, believes and represents it as charged with disease. Suppuration, of the worst terminations of acute founder, is frequently induced by bleeding from the toes; not that the mere act of drawing blood could bring such a result, but the wound inflicted on a part highly inflamed, gives a point of increased stimulation from which the formation of matter commences, and the structure of a horse's foot being such that it cannot find easy vent, it slowly but surely spreads until at last it destroys the bond of union between the horny and organic foot.

I have only alluded to those forms of disease in which I believe blood-letting is the most injurious. But there are numerous other maladies for the cure of which the practice is in high repute, a practice which I believe, if not always injurious is always useless; but to decry it in detail would be encroaching too much on the pages of our journal.

Caked or Inflamed Udders.—Our women-doctors agree with our cattle-doctors in one thing, that—in its various forms—oil rubbed on the udder will relieve inflammation. It should be done as soon as the difficulty assumes dimensions, before as well as after calving. Rub on every day, once, till cured.

Two are better than one to walk through life, as they aid one another.

HORSE SHOEING.

How many horses, valuable horses in many respects, are spoiled by having defective fore-feet. The general defect in the fore-feet is called "pinched," or contracted feet. This makes the animal tender forward, liable to fall when going down hill, and consequently unsafe.

When the forward feet of the horse are defective, his usefulness on the road is very much impaired; and in fact, there is no comfort or safety in using such a horse.

What causes tender feet? The most common cause is bad shoeing, with improper care of the animal. There are few good horse-shoers. Not one blacksmith in fifty knows how to shoe a horse properly. How frequently do boys and apprentices, as soon as they can drive a nail, undertake to set shoes without any knowledge of the anatomy of a horse's foot, or any of that inborn philosophy which teaches a man to look at the reason of a thing. It is a shame and an outrage upon the rights of horses to have such a state of things.

It is a lamentable fact, that not one man in a hundred knows when his horse is well shod.—Commonly, a man leads his horse to the blacksmith shop, lets the work be done, and then goes off with his horse satisfied, because he has shoes on his feet.

Sheep Raising in Kansas.

We take the following from the *Kansas Farmer* correspondence:

I now have 290 head. My increase this spring was 130, being 97 per cent. (including young and barren ewes). One lot of 30 ewes had 40 lambs in January. With great care I saved 24 lambs. The next lot came from the 20th of March to the 20th of April, requiring but little attention. This, I think, is the proper time for them to come; to effect this the bucks must be taken away from the ewes at farthest by the first of August. Better to keep the bucks separate only when used, which time would be from the 20th of October to December 1st.—One set of lambs is all I wish a year; the second crop are small and hard to winter. Besides they exhaust the ewes, and you get a light fleece.

My sheep are but little trouble in summer. I have a shade for them to go to during the heat of the day. I salt twice a week, and every third or fourth salting I add one-half a pound of sulphur, which kills the ticks and lice. Salt is the best medicine I know of for sheep, and they should have it the year round. Last winter I was cautioned not to salt my ewes, as it was sure to bring on abortion. I carefully kept a part of them from salt, and part had access to it when they wished. I saw a decided advantage in salting, and shall adopt that course in future.

To prevent the grub in the head, I smear their noses with tar in May, and once or twice during the summer. I think it keeps off the fly, and adds to the health of the sheep.

I commenced to feed last winter about the middle of December. I fed with corn fodder and prairie hay. I also fed about twenty pounds of shelled corn to a hundred head daily. Corn wants to be fed with care as there is danger of feeding too much. I have good warm sheds for my sheep to occupy when they wish. I also allow them what water they wish. On pleasant days they will make their living on the prairie and in the timber. Every sheep raiser should sow a good field in rye, for winter pasture; in fact it is almost indispensable in wintering, and in the spring answers for turning ewes on during lamb time.

The best time to dock and trim lambs is when they are from one to five days old, dependent somewhat upon the weather. At that age no accidents will occur. Spring lambs should be weaned about the 1st of August, and not sheared, as is sometimes done. On last August I sheared twelve strong vigorous lambs, others not so good I let go without shearing. The result was, those sheared wintered badly and sheared less by one-third than those not sheared in the fall. (I lost two of those sheared in August, during the winter).

I have experimented with several different breeds and give my preference to the Spanish Merino. I think they are best adapted to this country. I expect to grade my flock up with the bucks I can procure of that breed. I used last season the Black Tops, one kind of the Spanish. They produce a remarkably fine fleece, covered with a pitchy gum on the extremities. My bucks sheared 7½ lbs. washed wool each. I think they lose fifty per cent. in washing. I expect to procure from the East this fall several Spanish bucks of another order, larger carcass, longer wool, equally as dense and compact as the ones I now have, less gum, but oily "heavy shearers."

I would recommend, in conclusion, to those having native bucks to dispose of them in some way and procure the best blood they can; even a one-half blood, which can be had at small cost, will make an improvement. Spanish sheep do well in large herds, they are quiet and easily managed, seldom jump an ordinary fence, are good shearers, and their wool commands the best prices. The natives wont do well in large herds. They are an agile race, I've tried them. They can leap the highest fence, and

lose their wool in the spring. They shear light fleeces, bringing a small price per pound.

The cost of keeping per head will depend somewhat on the number kept. For four hundred or upwards, I think they can be well cared for at fifty cents per head. After sheep are accustomed to the range intended for them they are but little trouble. Dogs want looking after, they are generally unacquainted with sheep, and chase them every opportunity. I have lost several by them. Dogs are the greatest drawback to wool growers in Kansas.

Profitable Sheep.

E. A. Parks, of St. Johnsbury, Vt., says:

"I keep about 100 sheep. The flock was at first of the Leicester breed; but I have crossed with the Merino, so that my sheep are now about half blood of each breed. I have two rams of that cross that will weigh 200 lbs. each. They have yielded fleeces of 12 lbs. each. My whole flock generally averages 4½ lbs. washed wool. My flock last year gave me 6½ lbs. of wool per head, unwashed, and raised 100 lambs from 98 ewes. The sheep brought me in about $4.50 per head last year, and would have done as well this year if I had not sold till now. I have my lambs come in April or last of March; keep them under sheds, and give them what good hay they will eat, and give them grain when they first come to the barn. About the first of March I commence giving them grain again, and continue it till they go to pasture. When the hay crop is short I give them grain all winter. I have sometimes bought in Boston the second quality of beans, when they could be had cheap. It is a good plan to give sheep some browse through the winter, and give them sulphur in their salt occasionally and let them have good water as they want it."

CARE OF SHEEP.—The best authorities say that most diseases may be kept off by care and good feeding. We see no reason to dispute this. People who afford good shelter in winter for their sheep (even if the winter is favorable), and good feed the year round, are never troubled with grub in the head among their sheep: at least we never found it prevalent. It is wonderful how good feed fortifies; and good shelter and attention are feed virtually. The humane man, who has intelligence, will see to the things. Keep the grub out of the head, by putting grub into the stomach, says Dr. Dadd.

MAKING BUTTER IN WINTER.—A Farmer's Wife says, in the *Homestead*, a little salt stirred into the milk occasionally, while setting, will prevent "the white particles of curd so frequently seen"—an excellent thing, if true.

REMEDY FOR BONE AND BLOOD SPAVIN.—Herewith I send you a recipe for a blistering ointment which I have tried with success both on blood and bone spavins, and many other ills that horse-flesh is heir to. I have found it a very valuable remedy, and one I would not be deprived of for a great deal—it is perfectly safe, does not prevent the growth of hair, nor require that the animal should rest under its application. Pulverized cantharides 1 oz.; oil origanum 2 oz.: Venice turpentine 4 oz; oil sassafras 2 oz. Soak well and apply freely upon the spavin. One or two applications will cause a sore, and it will be necessary to desist until it heals, when the application must be renewed, and repeated until cure is effected. The remedy is perfectly safe, and will be effectual if persevered in.—[*Cor. Rural New Yorker.*

ABOUT SHEEP.—We find more Merino sheep upon hills than others; and that is the place for them. They are short nibblers and good little climbers. A large sheep ascends a hill with more difficulty, and has a larger mouth. Such a sheep, like cattle, you want on a rich, level, or rolling soil. Our prairies are fitted exactly for such a sheep. But, then, the Merino will do equally well here. For wool, let us again urge the Merino; for mutton, the long-wooled. The South Down is a hardy sheep and an excellent nurse, which is an excellent point. The Leicesters (we are now speaking of the long-wooled) are more delicate. The Oxfordshire seems to combine most of the desirable qualities of this kind of sheep. It does well for wool, well for mutton, and well for raising lambs. It is the best for a general sheep, where but one kind is kept.

HOGS EATING GRASS.—To see a large hog in a rattling yoke, eating grass, reminds one of old-fashioned times. An improvement has taken place. Now and then we find porkie eating his grass in the pen, where his economical master has carried it to him. It will do you good to see him (porkie) move his tail (thinking he has one), and satisfiedly take his grass with the rest of the grass-eating world. The grass should be cut when short and tender, and when moist. The dew on is a good time. The hog will lose no flesh on grass alone; will improve with a little addition of milk, refuse of the kitchen, &c. The grass comes in opportunely when food happens to get short, as is sometimes the case, especially when milk breaks off in August and September.

DISEASES OF SHEEP.—For the foot rot the *Irish Farmers' Gazette* gives the following simple remedy: Pare the foot, removing all the jagged and loose bits of horn, and anoint it with butter of antimony. Repeat it every second or third day, according as the feet are more or less bad.

HORTICULTURAL.

Orchards in the West.

It is doubtful whether fruit trees are as long lived in the West as in the East. Some pomologists put the average age of fruit trees (apple trees) in the West at 25 years. There are some that exceed this considerably. There are many that will not reach this. There is undoubtedly a difference in locality, even in the West. We are personally cognizant of this being the case in the East and other sections of the country.

There are various causes operating to produce this effect. A wet sub-soil is one of them. Intense cold is another. Uncongeniality of climate is another.

If the West has the disadvantage of rather short-lived orchards, it has the advantage of superior growth. Comparatively little manure is needed with us. Besides, an orchard can be grown with impunity so far as the grass is concerned. Here the advocates of the no-grass system are floored. They lay it to the fertility of our soil, and this is an advantage we have. For the growth of fruit trees should not be too great, as the frost is severe with the tender shoots. Hence, many dead tips are found upon our fruit trees. If half the growth were given, it would be infinitely better. This gives hardiness and health to the tree. It will live the longer; it will do better; but most of all, it will bear more and better fruit.

An orchard kept in grass, particularly in clover, after the first few years, will remedy this evil, and produce all the enumerated good qualities. This drain of the grass upon the soil, will hold in check the growth of the trees; will prevent excess. This principle extends to all localities where the soil is thoroughly fertile.

The first grand requisite in planting an orchard is, to see that the undersoil is dry. If wet, drain it, or plant no trees. A drain of six feet is better than four. Cut a deep drain if possible.

PRESERVING GRAPES.

It is with grapes as with all other kinds of fruit; in a dry atmosphere they will shrink; in a damp air, mould and rot. This is thorough experience as well as good philosophy.

Always, then, let your grapes, as any other fruit, *get ripe*. This is the first, the important thing of all. They will then save as wine (the wine is in them) saves. If unripe, there is an undeveloped juice (which is not wine) containing water and other ingredients, which will not keep.

For grapes that are to be used during the fall and early winter, pick and put in boxes (of whatever size you prefer), in two or three layers. Between each layer, put paper, cotton, or almost any thoroughly dry substance. Put into the cellar, if not too damp. It is not difficult to keep grapes for several months; but to keep over winter—that has been found more difficult. To do this, your grapes, as we before said, must be absolutely ripe, the late ripening included; for it will not hurt a grape to remain ripe on the vine, even several weeks. They should, however, have good cultivation, which not only equalizes the ripening, but hastens it, so that grapes will be ripe a week or two sooner. Then lay upon shelves in some room (not the cellar), and keep there, though it may take several weeks, *till the stems are dry*. Your grapes, then put up and put in a cool place, will keep; at least the best varieties will, till March. The Diana will readily do this; so will the Isabella and other varieties. Let your cellar be about at the freezing point, a few degrees under rather than over. We shall bury some of our bunches in charcoal this year.

Clover in Orchards.—It is the popular theory to keep clover out of the orchard. We could never see it in this light. Our experience is against it, and we see reason why it should be. Clover keeps the ground cool—very cool; this prevents evaporation to a great degree; and it is the evaporation in a drouth that dries the ground, which with a coat of clover is in a measure prevented. Now without drouth, i.e. an elevation of temperature, the ground would remain moist enough for vegetation; exactly the case where there is a coat of grass or clover. The heat, more than vegetation, dries the soil.

How to Kill the Peach Grub.—An effectual remedy, and which will do the business up at once, is—take a sharp pointed knife and follow up the insect till you find him, and then destroy him. This is the only certain remedy. Once done, and the thing is secure.

RABBITS IN NURSERIES.

Mr. A. L. Wood, of Ohio, wishes some one to give him a complete remedy to keep rabbits out of a nursery. He asks if a tight rail fence may not be made to answer, &c. I can give him a much cheaper remedy than fencing, having been many years engaged in the nursery business, in that portion of Kentucky abounding in caverns and sink-holes, in the broken limestone region, offering the most perfect harbor for rabbits, and where their numbers exceed anything that I have ever met with in any other country. My method is to serve them just as I would the traitors and rebels that now infest the land—hang them. This is easily done by stringing them up with snares set with what the boys call figure 4. If your correspondent has not taken his early lessons at these, I will describe the mode of proceeding. If small saplings are not growing immediately around the nursery, in their paths, get small poles of some elastic wood, say 1¼ inches in diameter at the butt, and about 8 feet long. Drive these into the ground, a foot or more; to the upper end of which tie a piece of twine eighteen or twenty inches long. Bend the pole to the ground, and where the end comes make a hole about the size and depth of half a large apple; encircle this hole with pegs three inches high, enclosing a space five inches in diameter, slanting the pegs a little inwards at the top; then, with a piece of tough sapling, about 22 inches long, and half an inch or more in diameter, cut a long notch, eight inches from each end, half way through, so that the ends may be bent at right angles with the middle, forming a kind of square staple. Sharpen the ends and drive them into the ground, one end forming a part of the circle with the pegs, on the side towards the foot of the pole, the other arm must be driven so that the horizontal part of the stick will be on a line or parallel with the pole, when it is bent down, and be about two inches from the ground; then make a spindle long enough to reach from the centre of the hole, and past both arms of the piece that are driven into the ground. Now form a noose on the end of the string, bend down the pole, and pass the noose over the tops of the pegs forming the little pen; two or three inches from that part of the string forming the noose, tie a little stick, in the center, one inch long, that is called the trigger; place the spindle, baited with a piece of apple, or parsnip, against the two uprights of the staple. The trigger is then brought to bear against this and the horizontal part of the staple, by being passed between them, and set very delicately; the spring of the pole keeps the spindle in place. The rabbit puts his head over the top of the pen after the bait, and the first bite generally hangs him by the neck. This mode of catching rabbits is only applicable in the winter season, nor do they depredate upon the nursery at any other time. I have caught sixteen rabbits in two nights in this way, with only four snares, four in each night at bed time, and four in the morning. Commencing with their first attacks upon the nursery in the fall, in two or three weeks all that are about may be taken. After a month or more others may make their appearance again; repeat the operation as often as any signs of their depredations are discovered.—*Cor. Country Gent.*

TIMELY SUGGESTIONS TO TREE PLANTERS.—A late number of the *Gardener's Monthly* very justly observes: "What are usually considered 'fine planting seasons,' frequently result in a large list of dead trees. The past season has been a very wet one, and as such classed with the good times." Trees planted when the soil is wet and pasty, or partaking of the consistency of mortar, can never be so well planted as when it is drier and more friable. Cavities are more apt to be left among the roots, and interstices badly filled. On the approach of hot weather the roots become dry, and the surface hard and crusted. If trees were planted the last spring under these circumstances, and are now in growing condition, it is of great importance to their success that the crust be broken and the surface thoroughly mellowed. Trees which might otherwise be burnt out and destroyed by drouth, may, by this treatment, be continued in healthy growth. This remark applies especially to newly set cherry trees, which, in addition to a clean mellow soil, should have the surface for some feet about them, covered with several inches of straw or litter. Cherry trees often start and grow for a while until killed by midsummer heat; the treatment here mentioned, timely applied, will nearly always save them.

EVERGREENS, AS SCREENS.—The evergreen is so beautiful, that wherever it appears, it is an excuse for growing. It is generally used for ornament; and where we find it in forests, it is magnificent. What, then, where it becomes a useful as well as ornamental tree? Some of our farmers, with a touch of the beautiful in them, plant rows of these trees to screen their more tender trees and plants. And they succeed admirably, eminently. We have before called attention to this thing. In half a dozen years, a good windbreak can be formed, sufficient for all purposes of protection to the owner, and for beauty to the world.

Planting and Trenching of Orchards.

Ed. Valley Farmer: It almost invariably happens, when a man decides to plant an orchard, that he selects a piece of ground which is unfavorable for general cultivation. If there is a broken or hilly piece of land upon his farm—that is the site he selects. The trees that he purchases, with roots wofully curtailed, are thrust into shallow holes every way inadequate to receive even the meagre amount of radicle appendages that the nurseryman may have left to them. And this he styles his orchard! Many of his trees, as a matter of course, die; many others have a hard struggle to live; the best grow tiresomely slow; and it is not until many years of anxious waiting (several past the bearing age), that his orchard begins to yield a scanty return for all his pains.

It is decidedly a wrong practice to devote the worst land on the farm to raising fruit. If people will persist in planting orchards after the common slovenly fashion, they ought certainly to select the most suitable ground they have, and be content to have fewer trees. Broken land may do very well; but broken land and poor soil, and poor planting, is altogether so very poor a practice, that it must inevitably result in poor trees, poor crops, and poor fruit.—To hope for fine fruit and thrifty trees, with such a method of planting, is as great a delusion as though a farmer were to dibble in his corn with the end of his cane, without either breaking up, harrowing or cultivating, and yet expect a crop from his labor-saving machine. A fruit tree, stuck in a poor, hard soil, and left thus to struggle with its fate, or cultivated in a manner that affords no aid to its roots, can have about the same chance, and no more, to develop its natural qualities, than would a hill of corn in the case supposed.

I have seen many plans in print for the planting of orchards, but of all the methods advanced, only one meets my entire approbation—that is Dr. Warder's who recommends digging but *one hole* in the orchard, and that as large as the orchard itself. Plowing the ground twice, or even thrice, in the same furrow where the trees are to stand, does not come near to the requirements of the case. Corn, even, if it might have justice done to it, requires as deep cultivation as that; whilst a tree, whose roots will descend four or five feet into the ground, if they be not obstructed by too hard a sub-soil, can receive but very little help from such kind of culture, when, after the first few years, its roots, as they enlarge, strike deep into the earth. It is the *spade, and not the plow*, that should be relied on in the preparation of the soil for an orchard. An industrious use of the spade, with the aid of manure—and the broken and hilly parts of the farm, in lieu of stunted trees and scanty crops, will produce trees more robust and healthy, and the fruit larger and finer, than will the richest arable land.

In perhaps no other country is there so little care bestowed in the setting out of fruit trees as in this. "An English gardener," says Downing, "when he is about to plant fruit trees, talks about preparing his borders; an American says he will dig his holes;" while he will consider it an ill day's work if he do not dig the holes and plant fifty to a hundred trees per day.—But notwithstanding all the care of the English gardener and the neglect of the American, the finer varieties of apples of the United States are superior to those of England or any other country; while in peaches, too, we surpass the rest of the world. Of course this excellence of these two important fruits must be attributed to our climate. But excellent as these fruits comparatively and positively are, *we shall never know their value to its full extent*, until we have done justice to our trees. Putting a tree in a confined, shallow hole, is not planting it; it is merely sticking it in the ground. Planting pre-supposes a due preparation of the ground to receive the plant or seed. Dibbling corn or potatoes in unbroken ground would be poor farming; and thrusting a young tree in a cramped hole in the hard earth, is equally as poor horticulture. And if with this miserable system, or lack of system, our climate enables us to beat the industrious and pains-taking fruit growers of Europe, how much more excellent must our fruits become when we, too, prepare our borders!

It is apparent, that to develop a fruit to its highest perfection, the soil, besides being made generous, needs to be stirred as deep and as wide as the roots will grow. But since the roots of most trees extend as far in the ground as their limbs do over them, the preparation of such a border would approximate Dr. Warder's plan of having but one hole in the orchard—a task that the mind of the amateur as well as the market gardener must shrink from with awe. And until machinery, cheap and practically economical, comes to our aid, such a wholesale plan of trenching must needs go a begging.

A mode of planting, which I have adopted for future practice, and have already to some extent carried out, is quite as effective for broken and hilly land as the Dr.'s, while it is far less appalling to contemplate.

I dig holes four feet wide and three or four feet deep—four feet deep is what they should be. I do not fill up the holes until a short time before planting, but leave the dirt to be mellowed into soil by the action of the air, light, heat, rain, snow and frost. I turn the soil over at least once, that it may be the more thoroughly exposed to the elements. On this exposure of the soil I would strongly insist; for, during the brief period between digging and planting, it will receive more benefit from the atmosphere than it otherwise would during the entire existance of the tree that it is to support and nourish. Hence, the longer the period between digging and planting, the better it will be; and if the holes were dug a year in advance, the advantage would be great and manifest. Fill up in time to allow the soil a chance to get settled by the rains before planting. If the soil be dry and very friable, it may be tramped moderately as thrown into the hole. Avoid handling it at all when wet. Be careful to throw back all the soil that was dug out of the

hole, or at least as much. This will raise the site for the tree somewhat higher than the ground adjoining. Plant on the raised site, taking pains to have the tree, when the soil has settled, not standing in a basin, for it must eventually fill up and the tree be then too deep. In two years the roots will have occupied the space thus allowed to them. I then draw a line with the spade all round the tree, and two feet from it, and, on the outside of the line, I dig a trench two feet wide, and of the same depth as the original hole. If the leading roots protrude beyond the circular line, I chop them off with the sharp edge of the spade, and pare the wounded ends with a knife. I esteem this an advantage. The rootlets are increased, and consequently the mouths that feed the tree from the soil become more numerous. It is an additional argument in favor of this pruning of the leading roots, in that it causes them to ramify more generally in the circumferance that has been dug, and where they are more accessible to the benefits of manure and culture than if dragging their long lengths with but few fibres away from the tree. The better to secure the advantages of this practice, the trench should be dug no wider than is barely requisite for a man to work in. The soil thrown out should be exposed as before to the elements. This trench, when filled, increases the diameter of loose soil in which the tree is growing to eight feet.

When it is ascertained that the roots have again transcended the bounds which the spade has prepared for them—the fourth or fifth year after planting—another trench, like the preceding, is to be dug. The hole will now be 12 feet in diameter. Any species of fruit tree will be bearing abundantly before the roots have fully occupied this second trench. But, as long as the roots continue to spread, the process of trenching, &c., should be continued. This, certainly, becomes an arduous task as the tree grows older, and the diameter of the trench necessarily increases, and will require a strong will and appreciating mind to carry it out.

In addition to stirring and exposing the soil in the manner indicated, it will be needful to employ both manure and amelioraters. This should be done at, or before, the time of planting. The practice of planting a fruit tree and deferring to manure it until "a convenient season," can never be sufficiently reprobated.—Everything should be first got ready, and the manure mixed with the soil as the hole is filled up. It can never afterwards be so advantageously employed. No manure should be used without having been first composted.

Having determined on planting, and having selected the site, the next consideration that should engage the attention, is the formation of the manure heap. For a year in advance the stores of the cattle-yard, the hog-pen, and the hen-house should be regularly collected. Abundance of muck should be gathered—or, what is still better, the black, rich mold of the bottoms; litter, leaves from the woods, green weeds, and saw dust, where obtainable, may be employed to swell and enrich the pile. It is amazing how large a heap can be raised in a short space of time where muck or mold are conveniently at hand, or where care is taken to employ the various auxiliaries that may present themselves. Mold may be used without stint or measure—It is both manure and soil, and the very best article, of itself, that the orchardist can use to infuse vigor into the growth of his trees. Let it be gathered with diligence, and employed with liberality. It is strong, mild, and lasting—the manure *par excellence* for fruit trees.

Judgment must be exercised with respect to the order in which these articles are added to the heap; and regularity is to be observed as regards the layers. Muck, or mold, is to be first spread of a thickness that will depend on the extent to which it is designed to employ it, say, one foot; on this layer the scrapings of the hen-house must be spread, or, rather, should be raked in, to save the ammonia from further exposure. A layer of green weeds, sufficient in bulk to compress to six inches, should be spread next; a layer of litter and leaves, six inches when compressed, must follow; then saw-dust, if employed, six inches; and, lastly a layer, six inches thick, of manure. A foot more of mold is to be added; hen guano, weeds, &c., as before, until the heap has attained a hight at least six feet, when a layer of mold completes it. The sides of the heap are to be kept as nearly perpendicular as possible, and the top level. It should be made on a site slightly inclined, having a gutter dug along the lower side to catch the drainings, which must be scooped back on the top of the heap.

Lime and charcoal should be added to the soil of an orchard. They are both fertilizers and ameliorators, and should invariably be used in conjunction with the compost. A peck, or two pecks of lime, with one to two bushels of finely-powdered charcoal, may be mixed with the soil of a four-feet hole, and proportionate quantities with that of the trenches. Care must be taken not to let the fresh lime come in contact with the roots.

I have no expectation that this plan of planting fruit trees will be adopted by many who contemplate setting out orchards. But the spirit of emulation has gone forth among our fruit men, and I trust that some of the most enterprising of them will try the experiment with a few trees of each variety cultivated. I believe that by such a mode of planting, the capacity of our fruits for improvement will be fully demonstrated—urging our present generation of trees to the utmost perfection they can possibly attain, and exalting the standard of excellence as much as that standard, at present, ranks above the trash of a neglected orchard.

And what must be the progeny of such perfect fruits and trees? Perfection perfected!—Notwithstanding some learned hypotheses that I have read, it seems quite natural to me that future seedlings, of such highly improved fruits, may surpass even them in excellence, in the same degree that they must surpass the trash referred to. If this opinion be correctly based (and the history of some of the best fruits is its foundation), it should certainly afford a high

incentive to the adoption of this, or some better plan of planting.

There is no phase of civilization that represents humanity so near to its primeval purity as does the business of the horticulturist. It was man's first and happiest vocation; and it is man's pleasantest business yet. And where genius and skill, with a well contented mind, come to bear on the reclaiming of the fruits run wild from Eden, there are moments when the Gates of Paradise seem unbarred, and again man walks in those hallowed shades and bounteous groves where the creature and the Creator, as two friends, were wont to meet and converse.—Such is the amateur horticulturist; and he ought adopt a more pains-taking and promising system of planting for the pleasure and inspiration it may afford.

But the practical fruit grower—the market orchardist—who loves the good and the beautiful with the amateur's passion and the merchant's instinct, should adopt the plan for the immense and sure pecuniary results that must flow from it. Fruit thus grown will make itself a name, and will be sought after. It must command a price unapproachable by other fruit. And the trees, besides coming earlier into a bearing state, and growing larger, must yield vastly larger crops. The trees, too, must necessarily be healthier, hardier, and longer-lived. It is apparent that a tree thus planted will be safer than other trees from the liability of being winter-killed. For, in addition to its constitutional vigor, the deep, loose soil below it will afford a secure retreat to its roots during the severe weather that often freezes the ground to the depth of two feet and more. It has been found by experiment that while the atmosphere was only 29° Fahrenheit, the soil, immediately below the frost, was 43°. A tree planted in the common method, in a hard soil, can have but a small share of its roots beneath the frozen crust during hard winters, and it is not surprising that many are winter-killed from this cause.

And the farmer—who often plants more fruit trees than he ought, and who can admire the good and the beautiful as well for their poetic merits as those more substantial ones that a keen relish for apple dumplings, peach cobblers and fine sass inspires—who should feel a greater interest in this mode of planting than he? It will save him land, and from fewer trees will yield him more and better fruit. It will save him money too.

During the last fall and spring there were more fruit trees sold and planted in this county than the entire aggregate planted in all the years before. The winter was unusually favorable to them, but a drouth of eighteen weeks continuance during the spring and up to the present time, has proved terribly disastrous.—Of three hundred planted by one man, not a tree, I have been told, is living. Another, one of my acquaintances, is in the same sad fix. Fully the half of all planted are dead or dying. Yet the trees were as fine and good as can be usually obtained. Now, mark the difference! I planted sixty-three peach trees, late in April, on a steep, dry hill, in the manner I have recommended. The leaves were almost expanded. During eighteen weeks no rain, at any time, has fallen sufficient to wet the soil down as far as the roots. Nor was any water used at the time of planting. Yet all are alive! Could any test be more demonstrative? Could anything be more significant?

It is of the greatest importance to the success of an orchard that the trees have a good start the first year. If they be stunted, their slow growth allows the heats of summer to act detrimentally upon the bark and sap so that they can never attain the prosperous condition of trees that shoot at once into a vigorous growth. A deep, mellow and generous soil is the only guarantee of successful planting. Never plant when the soil is too moist to crumble. Wet soil packed about the roots will never again become as loose and permeable as it was, or should be, when thrown up from the hole. The tender spongioles push in vain against the hard mass, and perish. A drouth bakes and cracks it, and the hot air insinuating itself through the fissures, kills, or greatly impairs the health of the tree. It is better to wait, though everything else be ready for planting, until the ground be ready to. I have seen miserable failures entailed on orchards through the want of a little patience.

Who of your well-to-do subscribers will adopt this plan, and set out an orchard that shall rival the fabled glories of Hesperides? Or, if the undertaking be considered too costly, and any of your readers, (having suitable land, facilities to good market, for the burning of lime and charcoal, &c.,) would prefer to have such an orchard planted on shares, I invite them to open a correspondence with me on the subject. I will do the work, and raise the trees, except for the earliest planting—they to find the capital. Here is a chance for a fortune to two parties, and to all who may adopt this method of planting.

P. S. Burnes,
Hardin, Calhoun Co., Ill.

Transplanting Trees.—It is the small, fibrous roots that give growth to the tree. The big roots are but ducts to carry the sap. By exposing your roots several hours to the sun after taking up, is not only hurtful but very apt to kill your tree. For these small roots are soon dried, and then it is all up; you cannot resuscitate the dead. When you take up your trees, keep them wet constantly; tree as well as roots, but roots especially. A better way, however, is to keep as much ground on the roots as possible. This is better than all your water. But wherever these hair-like roots are exposed, keep the sun or dry air from absorbing their life. The more a tree suffers at the root in transplanting, the longer it will take to recruit afterward. A little trouble in time will save a good deal hereafter. This is generally known, but too little practiced. We urge upon people attention at the time of planting.

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

Kirkwood, Aug. 6, 1863.

The fifty-sixth monthly meeting was held as above, President Beale in the Chair. The minutes of the former meeting were read and approved.

Twenty-one new members were added to the Society.

The reading of the third quarterly Essay was postponed till next meeting.

An Essay upon "The Barometer and its Uses to the Farmer," was read by the Secretary.

Samples of wine were presented by Messrs. W. H. Gray & Co., and Messrs. Robert and John Mitchell; and a splendid lot of honey in the comb, and also dripped honey was presented by Mr. L. D. Votaw.

A verbal report was received from the committee on printing the first Essay.

The report of committee on printing the second Essay was received, and a subscription taken up from the members exclusively, according to resolution.

The Fruit Committee reported: "That the display of fruits, of nearly all the varieties of the season, is in the highest degree creditable to the horticulturists of the vicinity—so large in fact that there is not room upon the tables for much more than half of the specimens which have been presented. Under the circumstances the Committee deems it scarcely possible, and not profitable, to make a full list of the samples with the name of each grower.

We desire to call attention to such specimens as are in our opinion most worthy of notice and discussion at this time.

The Early White Japan Melon, a new green-fleshed variety; by several growers. This species of herbaceous fruit is worthy of much more attention than it has generally received in this locality.

The Hartford Prolific Grape, nearly ripe; by Mr. Muir, Mr. R. S. Elliott, and very superior samples by E. R. Mason, is worthy of attention on account of its earliness and fair quality.

Among apples, the Sweet Bough, of which there are fine samples shown, is comparatively new among us. The Kirkbridge White is shown by two growers, and we think it the very best early summer apple for family use. The Summer Queen is worthy of attention, as it has been rarely, if ever, shown in the Society.

The large yellow peach, by Dr. McPherson (name not known), is worthy of attention on account of being very healthy, of good quality and escaping frost; and also the basket of nearly all yellow peaches, by Mrs. Capt. Swan, of excellent quality. The yellow peaches have one peculiar merit for many persons, they re-produce themselves, or very nearly, from the seed. In variety and quality of peaches, Dr. McPherson has the best display, comprising the following: Haines' Early, Early Crawford, Old Mixon Free, Noblesse, Serrate Early York, Cole's Early Red, Druid Hill, and the yellow variety unknown, perhaps it is Bergen's Yellow." L. D. Morse, Ch.

The Committee on Flowers report a gorgeous display of flowers upon the tables; 18 varieties of Dahlias, 20 varieties of Roses, fine specimens of Double Zinnias, and a handsome vase bouquet, by Mr. C. Connon.

An admirable specimen of Lillium Lancifolium Rubrum, in pot, by Mrs. Spencer Smith.

A beautiful salver bouquet, by Miss Helfenstien.

A collection of fine single and double Zinnias, by Mrs. Dr. Beale.

A magnificent collection of grasses, by Mrs. Dr. Spalding.

Of bouquets the display was truly fine. That of Miss Bodly, No. 1; Miss Albright, 2; several fine ones by the Misses Elliot and Mrs. Mudd.

Of this truly superb collection of flowers it is hard to speak, as there is so little room for comparison. The collection of Dahlias by Mr. Connon, including many varieties named, with their colors blending in such harmony, is a most pleasing sight, and illustrates how much more effective is harmony in coloring in the arrangement of the soft blending shades of the Dahlia than is contrast, which is almost invariably the mode adopted in displaying this singularly lovely flower. The Double Zinnias by Mr. Connon and Mrs. Beale were new here; those of Mr. C. as double and full as a Dahlia.

The Ornamental Grasses by Mrs. Spalding merits more than a passing notice, not more for the industry and ingenuity displayed in the collection, than their illustrating the importance of the grasses in floral arrangement—a circumstance too much neglected by the devotees of Flora—and the same remark applies to dry bouquets of all kinds.

The beautiful Salver bouquet of Miss Helfenstien is much to be admired for its simple loveliness, and a specimen of Rose Balsam in it merits special notice.

In the bouquets it is extremely hard to discriminate, where all are so meritorious. The richness of the combinations, the rarity of the flowers, the perfection of their growth, indicate an extensive acquaintance with Flora's choicest beauties, a true appreciation of their capabilities in combination, showing that size, form, color, &c., are varied almost to infinity, while unity pervades the whole. Here, in such a display as these tables afford, while we witness this delightful blending of the "Good for food and pleasant to the eye," we are insensibly led to wonder, to adore, and love their great Author. Wm. Muir, Ch.

The Vegetable Committee reports:

Tomatoes—Several fine samples of the different varieties. Fegee, by H. W. Hough; Perfected, by L. D. Votaw and H. I. Bodley; Large Red, by R. S. Elliot; Perfected and Plum, by Mr. Sutherland; Tree, by R. N. Bailey; all remarkably fine.

Corn—Tuscarora, by R. N. Bailey; Common field, by L. D. Votaw, in the roasting state, a fair sample of a field of 30 acres, extremely fine indeed; and a splendid specimen on the stalk by Mr. Spalding.

Beans—Lima, by R. S. Elliot; an extra fine variety.

Beet—White Globe, by L. D. Votaw; very large.

Potatoes—Seven varieties by L. D. Votaw: Early White Sprout, White Neshannock, Pink Eye, English Fluke, Peach Blow, Blue Kidney, also a variety recently imported from Ireland, said to be the Cup.—By Wm. Brown, White Sprout. By John Spalding, English Fluke; Mr. S. also presents a specimen of Timothy over 4 feet high.

Mr. Bailey presents specimens of green Tobacco—Cuba and Maryland Seed Leaf.

The following came to hand after the foregoing was made out.

Tomatoes—Perfected, by M. Avery; Perfected and Pear, by George H. Gill; Tree and Perfected, and a plant of Australian coffee, Bull Nose Pepper, White and Long Red Beet, Turnip Beet, Rutabaga, Early Winningstadt Cabbage, by E. Barnard. Linnæus Rhubarb, Silverskin Onion and extra large Red Tomato, by Mr. Smith. By Mr. Helfenstien, Perfected, Tree, and other tomatoes, all very fine; Bull Nose Pepper, White and Purple Egg Plant, Silverskin and Red Onion, Long Blood Turnip, Yellow Sugar and Large White Sugar Beet. By Thomas Hanley, Green Tobacco. All the samples were truly fine and in the greatest profusion.

T. R. Allen, Ch.

On motion, the President appointed a committee of three to test the wines on the table, who, after examination, presented the following

Report on Wines.—The Committee on Wines beg to report that the samples on the tables of this Society are not numerous, but highly creditable to the exhibitors. The specimens of Champagne presented by Messrs. William H. Gray & Co., were worthy of high commendation. That of Fleur de Bouzy was of superior excellence; the Sillery Mousseux is also de-

licious. The specimens of Catawba by the same gentlemen were of excellent quality.

A bottle of White Catawba presented by Messrs. Mitchell was a very fair article.

Respectfully submitted,

E. R. Mason, Ch.

The discussion of the Fruits on the Table being the order, Dr. McPherson said there was so much upon the table it was hard to know where to begin. He referred to the anomaly in the order of ripening of the peaches, the early peaches being later, while the late peaches were earlier, thus Hainer and Crawford's Early ripened at the same time, while in other seasons there was 10 to 15 days of difference, the same held true of several other varieties. There had been considerable rot in the fruit on the tree. There is here a basket of some 8 varieties of yellow-fleshed peaches very fine and extremely early for the class.

Dr. Morse referred to two samples of the Kirkbridge White which had engaged the attention of the Society, and other Societies also; there are specimens here from Dr. McPherson and from H. C. Wright, of Carondelet. It commences ripening about the middle of July and continued over six to eight weeks. I prefer it before all the summer apples; it is a good, regular bearer. The Summer Queen presented by Mr. Bodley has not been before shown to the Society, and is very fine.

E. B. Coleman said that pears were much finer in quality if house ripened than if ripened on the tree; they are much richer and less astringent; gather just at changing color, keep from the air (don't know whether light affects them much or not), and they are superior in every respect. Beurre Giffard is the best early pear we have, gone three weeks ago. Doyenne D'Ete in every respect good, ripened five weeks ago. The Madaline is cultivated as an early pear, is not near so good or early as many others. Tyson, a very rich pear. Bartlett must be picked green and house ripened. Beurre Capimont is a fine pear. Gansel De Bergamot is a good pear in its time. White Doyenne drops from the tree with me. Beurre D'Anjou, a fine pear, bears young and very full. Chaumontell, a good pear in its time. Van Mons, an excellent pear. Kirtland, rich pear. Louise Bon De Jersey, a fine pear if not allowed to bear too full. Doyenne Robin, a good and beautiful pear. Napoleon, good pear, immense bearer; Oct. Nov. Many others were noticed, but far out of season. In answer to a question, Mr. C. said, I think that the three most profitable pears are Louise Bon De Jersey, Bartlett and Beurre D'Anjou, or the White Doyenne. In answer to a question—appearance is much more important than quality in a market fruit.

Dr. Claggett: Held up specimens of Dearborn's Seedling—a good pear, desirable on account of ripening about the middle of July, rather too small for market, but in the order of succession should be in every collection. Seckel, a very large specimen exhibited. Stevens' Genesee, a very fine, hardy tree, cannot say much about the fruit.

Smith's Orleans plum, raised by Mr. McClure, is fine and large, was bought for the Green Gage, but a lady discovered that it was a purple plum.

The fine collection of plums by Mrs. Blakey elicited much remark.

An interesting conversation on the rot in the grape took place, with a view of being able to make out a tabular statement of its proportions in the several varieties.

The President announced that the next meeting will be held at the house of Mr. L. D. Votaw, near Eureka, on the first Thursday of Sept.

Wm. Muir, Sec.

Ashes on Fruit Trees.—We have seen the best effects where ashes have been applied to the soil of trees, in some cases almost miraculous. The effect of ashes on the grape vine is well known. Where a soil is somewhat sandy or gravelly, a top-dressing is sufficient; otherwise the ashes should be mixed, deep down, with the soil, though even then it will benefit the trees, more particularly young orchards.

Illinois State Horticultural Society.

To the Horticulturists of the North-west:

The second Annual Fair of the Illinois State Horticultural Society, will be held on the grounds of the Winnebago County Agricultural Society, at Rockford, on Tuesday, Wednesday, Thursday and Friday, Sept. 8th, 9th, 10th and 11th, 1863.

There is every reason to believe that with a slight effort on the part of its friends, this Fair will be a decided success. The present year has been one of the most favorable for the fruit growers thus far, and the fruit exhibited promises to be abundant and excellent. The well-earned reputation of the florists of Rockford, ensures a full and brilliant display of garden and green-house plants from that locality alone; and this will doubtless be augmented by the emulative skill of neighboring horticulturists. The more homely, but equally important department of vegetables, will, it is hoped and believed, be well filled.

The exhibition will be held on the beautiful grounds of the Winnebago County Agricultural Society, in three large halls, which will be decorated in a fitting manner, under the direction of the Rockford Horticultural Society. The season of the year selected is one which will best bring out the various products of Northern, Central and Southern Illinois in one comprehensive exhibition, which in its varied development of the same fruits, &c., from different latitudes, will form an admirable study for the pomologist as well as an attractive display to the lover of the beautiful.

The usual facilities in the way of half priced tickets and reduced rates of expressage will be granted by most of the railroads.

It has been the boast of the fraternity, that amid the distracting and absorbing events of the rebellion, horticulturists have retained beyond other classes an interest in their wonted pursuits; and have practiced their usual arts of peace, on the very verge of civil war. The fact itself is an eloquent eulogy upon the delights of horticulture, and furnishes at once a reason and expectation that they will come out in their annual festival, in the golden days of autumn. The season of the year, the scenery of the Rock River Valley, will be alike propitious for gala days of social intercourse and mutual instruction among the doctors and disciples of horticulture.

Evening discussions will be held in the city and an address is expected from Dr. John A. Warder, of Cincinnati.

W. C. FLAGG, Cor. Sec.

Alton, Ill., August, 1863.

Special Committee on Grapes and Vineyards.—The following members of the Mo. State Horticultural Society, viz: W. C. Flagg, L. D. Morse, C. W. Spalding, N. J. Colman and Geo. Husmann, are appointed a special committee to examine the vineyards of Hermann and other localities during the present month at such times as may be most convenient, and report upon all matters of interest relative to the varieties of grapes, the condition and cultivation of vineyards, &c., said report to be made to the annual meeting of the Society in January next.

Sep. 1, 1863. Henry T. Mudd, Pres.

Error loves to walk arm in arm with truth, to make itself thought respectable.

DIET IN SUMMER.

In summer, there is more or less costiveness: there is also languor. There are bowel complaints of various kinds, diarrhea being a principal one, and bilious diarrhea or cholera morbus the worst form. Lassitude or weakness is generally prevalent. All these difficulties, and many more, are peculiar to our summers, and to warm climates. Hence, people of warm countries are denominated bilious. Is it then the heat alone that produces this train of inconveniences? It is not. Diet will mostly remedy the evil—not entirely—as cold is a tonic, and consequently heat, or the absence of cold, must be the reverse. Diet then will alleviate, not entirely obviate.

But how diet?

First, by eating less. Heat weakening the system, the stomach always partakes of the weakness, as it is part of the body, and the most susceptible of all, as it is more finely organized by sensitive nerves. It, therefore, has less strength, and of course less work must be done by it. Yet, if the same amount of food is used, and that is generally the case, debility must ensue; the system will be the more reduced; and the train of evils, of which we are speaking, are the result. With the stomach sympathises the whole system, but more particularly the organs connected with it in the *primæ viæ*. Thus the liver is pretty sure to suffer in summer. It suffers in consequence of the stomach suffering first: it suffers through sympathy, as the head aches through the same cause, the side, back, &c.

But what diet?

That which agrees best. Each man ought to know for himself. A man, it is said, is a fool, or his own physician, at forty. We will substitute thirty for forty. But to particularize:

Coffee is generally injurious in summer, even to the rugged, especially with milk and sugar. We mean the same quantity drank the year round. A less quantity is unobjectionable. For invalids, it should be entirely avoided, especially for dyspeptics; and most people are dyspeptic in summer. Some people cannot do without their coffee at breakfast. These will be necessitated to use it. But they should use it more sparingly; for when it once becomes a necessity, it is then pretty sure to be an injury, as the system then sustains a morbid appetite.

Grease is a serious objection. It should generally, if not universally, in summer, be excluded from the table. Fats of all kinds should go with it, so far as the suffering are concerned: only allowed to the healthy, and that in the case of fresh meats. Only the stoutest and most iron constitutions should indulge in pork, old pork; fresh is less objectionable. Of course, all pastry made of grease, including butter, comes under this head. A dog will digest anything, even bones; but a man has to do differently.

There are many things we might mention that should be used cautiously or discarded entirely during the summer; but they are too many to enumerate. We will mention a proper summer diet:

Light, sweet bread, not under a day old, including biscuit, which seems less objectionable when new; fresh, sweet butter; the berries in their season, with or without sugar and cream, including the fruits of the orchard, and lightly of garden vegetables, though peas are excellent; onions, when sparingly used, beets as greens, tomatoes, &c.; tea less indulged however than in winter, and not more than twice a day; fish; fresh meats, avoiding the more fat; potatoes, only when mealy. The reader, undoubtedly, could add more to the list. Let him add Johnny cake (corn bread), and griddle cake, or pancake of almost any kind, if such cake agrees with him, and we believe it does with most stomachs. We know the most delicate with whom it agrees most excellently.

When he goes into the garden, however, he must be careful of the tempting cucumbers. They have cost many a life, and innumerable evils. So have their fellows, the radishes and the cabbages. Cabbage is a poison and should be excluded from the garden. There is enough without these pernicious plants. They are seductive, and hence their evil.

Quantity has as much to do as quality. Always remember that. Eat less to begin with, and you will find an improvement. Select your food, and you will be still further improved.

The acids are grateful and cooling in the summer; especially the vegetable acids, which

are hence recommended. Vinegar, with a touch of sugar, is of use; small beer sometimes, and lemonade. But too much sugar should not be used. The sweets are best in winter. In the weakened stomach in summer they are apt to produce fermentation, which cannot be thought of. Eat less, and eat what is known to be fit; and do not be governed by desires, by hankering. It is this which is doing the mischief; it is not a healthy appetite. The appetite is generally lacking in summer, and a spleeny hankering, a morbid craving after food and the various drinks, has taken its place. This is dangerous and must be guarded against.

An attempt at dieting may at first be unpleasant, unnatural; but it can soon be acquired: and if the effect is not at once seen, it will soon tell. And once understood, the individual is safe; not always cured, for appetite will now and then take advantage of the most resolute. Whims are one of the symptoms of a disordered appetite, and these must be overcome. Pay no attention to them. The first step is generally the most difficult.

Poetry.—It is natural for people to love poetry. Yet how few relish it or ever read it. The reason is, that the verses they read are not poetry. They will rather read prose, which has more poetry than verse generally. Prose is a natural utterance, like conversation. If it contains feeling, emotion, that is poetry. Verse, such as we meet with now-a-days, contains little feeling of any kind, except that of contempt—contempt for the writer. The difficulty with the verse of the day, is, it is mechanical. Verse is eminently a matter of art, and this art requires to be learned, the most of a life-time must be devoted to it. Hence, all our best poets have been early rhymers; and even these are not generally relished, so critical is the art. The great, the natural poet is yet to rise; the poet that will be universally popular, as the orator is popular, the actor, the romancist. For it is feeling, agreeable feeling, that must be communicated.

Of all the follies of the world, war is the greatest.

To be angry is to be possessed of a demon. Regret will be sure to follow.

True music is a cry of the heart.

Duty makes life endurable; emotion makes it desirable.

Domestic quiet is a jewel; love the light in it.

LATE FLOWERS.

BY ALBERT SUTLIFFE.

Here and there in the autumn
Flew the leaves, brown and red,
And fell like a royal garment
To cover the queenly dead.

Some were as brown as berries,
Some were as red as flame—
And though they rustled like grave clothes,
The passers passed the same—

Passed with their trailing riches
Into the noisy town,
With shivering laughter mocking
The skies so dusky and brown.

I saw by the sloping pathway,
Some tender flowers alone,
While the wind brought down new showers
Like sparks from a furnace blown.

Up 'mid the tall, dry grasses,
From the cold-hearted sod,
With the smile for the world a dying,
And prayerful hands for God;

Cheer for my own dark sorrow,
Under those leaden skies,
And a look of longing and waiting
In sweet, expectant eyes.

Above the bare twigs quivered,
For the east blew damp and cold,
While the sad earth buried her daughters
Low in the chilly mold—

And I thought they were watching and wailing
Till all were gone to rest,
Then latest and lonliest they would sleep,
Pressed to their mother's breast.

So, too, in this world of sorrow,
Some human flowers bloom late,
Silently leading upward
Their friends to the Beautiful Gate.

For all the broken-hearted
Pouring their soothing balms—
Over the snowy bosom
Folding the quiet palms,

Until about their footsteps
The leaves of autumn blow,
And drifting o'er angel foreheads,
Gathers the winter snow.

Then I thanked the Holy Father
For all the blooms that be;
And chief for the autumn watchers—
These sisters of charity;

And for all the human flowers
That watch and sleep and wait,
Until, deep in the golden twilight,
They enter the Beautiful Gate.

Men succeed who are in love with their vocation. If they fail once, they will try again; if they fail the second time, they will try the third. In a word, they will keep trying, as a toper will keep to his cups, and a good man continue his good deeds—because the inclination is there. All people have inclinations. How well if well directed. Otherwise unfortunate.

A smile is cheap, but has great interest.

THE HUMAN BAROMETER.

Human as well as artificial barometers are good to foretell the weather. This is not paradox. The same influence which affects the one, affects the other: a change in the atmosphere, and here is where the weather is concerned.

When the air becomes dense, we know it is more or less free from humidity. Hence, there is less tendency to rain, or to the formation of clouds. Now, this variation in density is just the thing that affects the barometer. The greater weight and consequent pressure of the air upon the fluid, causes it to rise in the column. Thus we can foretell coming weather. If the column rises, fair weather is the result, because the air is then heavier and free from water.

This humidity, or the cause of it (electricity, or whatever else it may be,) has an effect upon the human system, particularly the nervous system, but more particularly on a broken or bruised limb recently healed. Neuralgic pains will be felt in it preceding a storm; the change of the atmosphere affecting the weakened nerves of the limb, or any weak or affected part of the system. Thus corns are apt to ache at the time of the change in the air (not yet the weather); scars of healed wounds to itch. There will also be headache with some, languor, and many other disagreeable sensations. When these attack the person, it will be in fair weather, and just before a storm, ranging generally from a few hours to forty-eight hours; though in most cases from one to two days.

We know some people who are always consulted, particularly in harvest, about the weather. They seldom or never fail to meet the required information.

DISINFECTANT.—Bad smells may be mitigated by various substances. Kreosote is one of the most powerful, but it is expensive. Copperas is perhaps equal to it, this also is expensive. For general purposes, the cheapest things are gypsum (plaster of paris), and charcoal.—Place either of these where the air is foul. They take up the odor by absorption. Copperas (proto-sulphate of lime) decomposes the noxious gases. So does chlorine. Throw plaster, or pounded charcoal in places where foul smells eminate, and you will be relieved of the offensive odor. Put in privies, barn-yards, compost heaps, &c.

SELF-RESTRAINT.—Good qualities are generally praised. We saw it stated the other day where a man was praised for keeping down his opinion. The thing struck us at once. "It is my opinion," means generally, "it is my vanity."

UNLUCKY MOMENTS.—We do many things that we repent of. These may be termed unlucky moments. Sickness unfits a man for business, mentally as well as physically. In melancholic moods, suicide is committed. Bad marriages are often made under the spur of bad impulses: a life-long repentance is the result. Hasty contracts are frequently followed by "repentance at leisure." The man troubled with bad digestion has many things to regret. He sees through a wrong (morbidly-nervous) medium; and, his feeling partaking of the same, he acts necessarily as he sees and feels. A slight thing will sometimes determine a man's course for evil: a gnat will bring a mountain of misfortune. Men of feeling are too often men of impulse, and hence of disappointment. We should always stick to our arithmetic, and never permit feeling to thwart our calculations. A warm heart and a cool head go well together.

DYSPEPSIA.—There are many dyspeptic people in the world—in fact, none are entirely free from attacks. Dyspepsia is not a disease in itself; it is not so called, no more than debility, languor, which are effects of it. Dyspepsia originates from an abuse of the stomach, weakening or otherwise afflicting it. The stomach is always affected in dyspepsia, though the liver and other organs are apt also to suffer.

There is but one cure, and that is to remove the cause—unless the thing is of long continuation and has passed beyond the cause. Then the only thing is diet. This can be aided by exercise. It can also be aided by a change of place, occupation, getting up a revulsive action. These, however, are only aids. Diet is the main thing after the cause is removed. Discard drugs; be not tempted by them; they are sometimes aids, but oftener hurtful.

JENNY KISSED ME.

Jenny kissed me when we met,
Jumping from the chair she sat in;
Time, you thief, you love to get
Sweets into your list; put that in.
Say I'm weary; say I'm sad;
Say that health and wealth have missed me;
Say I'm growing old, but add—
Jenny kissed me! [LEIGH HUNT

TO AVOID SUMMER COMPLAINT.—Be careful of what you eat and how much. The stomach is weak in summer, caused by the heat, and less food is necessary. If the same food is persisted in, the stomach and the liver, sympathising, will kick, and diarrhea will be the result; not always, but this is the way summer complaint is brought about.

[Written for the Valley Farmer.]

AUGUST.

This year there is no "dust"
Upon the "mantle" of August—
At least in our community.
The poet's opportunity
To libel this fair month (I call
It fair, as I do all)
Is gone; and I am glad of it,
That is the bad of it.
The heat and dust,
And that which rhymes with it, the rust,
Have all departed, and the sky,
The earth and air,
Are all as fair
As June—as glossy as July.

There is no dust;
There has been rain—
Fine summer showers
(With now and then a storm
That does a little harm);
Showers that open wide the flowers,
As if it were but May—
But, yet the flowers will tell:
They are less infantine, more gay,
Than in the month of May;
Are just as sweet.
Look just as well—
For they are flowers,
(All flowers are neat)
The children of the earth;
And they will have their birth,
As if on purpose sent
For the event.
These now appear
Deep in the middle of the year.
You'll find them in the fields—in lanes—
Some in the wood;
But mostly on the river plains,
Where oft they hang in silken skeins,
Or droop in heavy mood.

These are the doings of August,
The "fiery-eyed," the month of dust;
And dust is useful now and then,
To contemplate contrasted things
(Which to the mind it brings).
It purifies yon hidden glen,
Its prattling waters, diamond-eyed,
Now also purified
And cool, where fleet the trout
Its in-and-out
Makes good from pool to pool.

But fairest of hot August's sights,
Are—not his rich illumined nights,
Nor many fruits, nor fields of grain,
Nor yet his twinkling lights
Upon the twilight plain,
Nor on the mountain heights
His silken skein:

A humbler thing is mine to love,
(Who love too well,
Perhaps—I cannot tell—
Earth's lesser things,
Yet which with equal care she flings)—
It is a common flower,
A very humble, lowly flower—
The pitcher that the pumpkin holds—holds up
To catch the dew,
And also the bees that make too bold.
It is a pretty-shapen cup,
A star—transparent, bright and new,
As if just issued from the mold.
The sun loves to behold
Such generous flower, such star of gold;
And the pleased vine her flower will lift
In gratitude to show the gift.

But there are other sights,
And also sounds,
Which August bounds
With sweet delight.
Oh! the refreshing sense
Which indolence,
Reclining near some buckwheat field,
Will yield!
From out whose depths
Issue the harmonies
Of myriad bees,
And insects of a smaller note
That on the sweetened zephyrs float.

All these are hidden in the spell
Which August spreads o'er field and dell,
In waiting for the Autumn's turn
To lay them in its silent urn.
Already in the evening skies
We read the coming mysteries;
The moaning wind, the slanting ray,
Proclaim the summer's near decay. F.G.

Natural Barometers.—Chick-weed is an excellent barometer. When the flower expands fully, we are not to expect rain for several hours; should it continue in that state, no rain will disturb the summer's day. When it half conceals its miniature flower, the day is generally showery; but if it entirely shuts up or veils the white flower with its green mantle, let the traveler put on his great coat. The different species of trefoils always contract their leaves at the approach of a storm; so certainly does this take place, that these plants acquire the name of the husbandman's barometer. The tulip, and several of the compound yellow flowers, all close before rain. There is a species of wood-sorrel which doubles its leaves before storms. The bauhinia, or mountain ebony, capial and sensitive plants, observe the same habits.

There are two kinds of girls. One is the kind that appears best abroad; the girls that are good for parties, rides, visits, balls, etc., and whose chief delight is in such things. The other, is that kind which appears best at home; the girls that are useful and cheerful in the dining room, and all the precincts of home.—They differ widely in character. One is a moth consuming everything about her; the other is a sunbeam, inspiring life and gladness all along her pathway. Now, it does not necessarily follow that there shall be two classes of girls. A slight education will modify both a little, and unite their good qualities in one.

Little Things.—Life is made up of little things. He who travels over a continent must go step by step. He who writes a book must do it sentence by sentence. He who learns a science must master it fact by fact, and principle after principle. What is the happiness of our life made up of? Little courtesies, little kindnesses, pleasant words, genial smiles, a friendly letter, good wishes and good deeds.—One in a million once in a lifetime may do a heroic action; but the little things that make up our life come every day and every hour. If we make the little events of life beautiful and good, then is the whole life full of beauty and goodness.

Draught of the Seine.

A Shrewd Doctor.—An English gentleman once fell from his horse and injured his thumb. The pain increasing, he was obliged to send for a surgeon. One day the Doctor was unable to visit his patient, and therefore sent his son instead. "Have you visited the Englishman?" said the father, in the evening. "Yes," replied the young man, "and I have drawn out a thorn, which I ascertained to be the chief cause of his agony." "Fool!" exclaimed the father, "I trusted you had more sense; now there is an end to the job."

To Preserve Apples from Rotting.—Put them into a dry cellar, of easy access to a large family of children.

Not Drunk.—"What! are you drunk again?" "No, my dear, not drunk, but a little slippery. The fact is, my dear, some scoundrel's been rubbing my boots till they are as smooth as a pane of glass."

Sloshing About.—The Montgomery *Mail* seems to have a fund of humor on hand, and gives occasionally a South-western sketch by a few touches that are as telling as Hogarth's.—It would seem that at a certain court time in Pike county, there was a trial for a general row, and a witness testified that one Slantonstall, jest kept sloshin' about. As this remark regarding the chivalrous Slantonstall, was frequently repeated, said the lawyer for the defence:

"Come, witness, say over again what it was that Mr. Slantonstall had to do with the affair."

"Slantonstall? Why, I've told you several times. The rest on 'em clinched and paired off, but Slantonstall, he jest kept sloshin' about."

"Ah! my good fellow," exclaimed Nat, quite testily, "we want to know what this is. It is'nt exactly legal evidence in the shape you put it. Tell us what you mean by sloshing about."

"Well, answered the witness very deliberately, "I'll try. You see John Brewer and Sykes they clinched and fout. That's in a legal form, ain't it."

"Oh, yes," said Nat, "go on.

"Abney and Blackman then pitched into one another, and Blackman bit off a piece of Abney's lip; that's legal, too, ain't it?"

"Proceed."

"Simpson an Bill Stokes an Murray was altogether on the ground a bitin' an kickin' one another; that's legal, too, ain't it?"

"Yes; but what about Slantonstall?"

"And Slantonstall made it his business to walk backward and forward through the crowd with a big stick in his hand, and knock down every loose man in the crowd as fast as he come to 'em. That's what I call sloshin' about."

A wag, upon visiting a medical museum, was shown some dwarfs, and other specimens of mortality, all preserved in alcohol. "Well, said he, I never thought the dead could be in such spirits."

Domestic Department.

Candles—Take of alum 6 lbs., dissolve entirely in 10 gallons of water, bring the solution to the boiling point, and add 20 lbs. tallow, boiling the whole for an hour skimming constantly. Upon cooling a little, strain through thick muslin or flannel; set aside for a day or two for the tallow to harden; take it from the vessel, lay aside for an hour or so for the water to drip from it, then heat in a clean vessel sufficiently to mold; when molded, if you desire to bleach them lay upon a plank by a window, turning every two or three days. Candles made strictly by the above recipe will burn with a brilliancy equal to the best adamantine, and fully as long.

Making Lard—Cut the fat up into pieces about two inches square; fill a vessel holding about three gallons with the pieces; put in a pint of boiled lye, made from oak or hickory ashes, and strained before using; boil gently over a slow fire, until the cracklings have turned brown; strain and set aside to cool. By the above process you will get more lard, a better article, and whiter than by any other process.

Making Soap Without Grease—1 bar of common rosin soap, 1 lb sal soda, 1 oz. borax—dissolve the soda and borax in 3 pints of rain or soft water; then add the soap, and boil until dissolved, when you will have, upon cooling, 10 lbs. of good soap, worth from 8 to 10 cents a pound, and costing only 1 cent per lb.

Cheap Soap—6 lbs. sal soda, 4 lbs. lime, 4 gallons water; mix thoroughly; heat, but not to boiling, until the soda is dissolved; then after the undissolved portion of the lime has settled, draw off the clear liquid; to 7½ lbs. grease, previously heat to melting, add the liquid by degrees, bringing to a boil upon the first addition, continue the boiling for 1½ hours, then add ½ a pint of common salt and boil 15 minutes; set aside to harden. For complete success with the above, great care must be observed in drawing off the water from the undissolved lime, as the slightest quantity of lime in the soap will render it liable to crumble.

Cure for Rheumatism—I can recommend the following recipe as a sure cure for rheumatism: Two ounces oil of Origanum, two ounces sweet oil, two ounces tincture of Ammonia. Mix the above ingredients in a bottle, and apply externally three times a day.

Hard Soap or Soft—Take good soft soap, any quantity you choose, bring it to a boiling heat, then add salt gradually, stirring it constantly till you observe it separate, something like curds and whey; then let it cool and you can cut into bars and take out, leaving the ley in the kettle. To purify it further, put the soap again into the kettle, and add an equal quantity of water, and for every five pounds of soap one-fourth pound of rosin; make it boil, and again add salt as before. When cold, cut it into bars and lay it up to dry.

Toilet Soap—One and one-fourth gallons clear water, 5 lbs. of opodeldoc soap, ½ do. sal soda, 2 tablespoonfuls alcohol, 2 do. spirits of ammonia, 1 do. turpentine, 1 do. camphene, 1 do. powdered borax. Shave the soap fine, then boil all together until dissolved. If, after it is cold, you find it is not hard enough, melt again. Make it in any form you please. Color with Chinese vermillion. The mode of scenting depends on your own judgment, as in cooking. I like sassafras.

Premium Corn Bread—Scald a pint of Indian meal, add to it a pint of sponge, half teacup molasses, small teaspoon saleratus, stir in flour with a spoon till quite stiff, put in pan, let it rise, and bake it one hour.

Editor's Table.

Only Seventy-Five Cents.

We will send the VALLEY FARMER from the first of May to the end of the year—eight months—together with our Premium Essay on the Culture and Manufacture of Sorghum, for only seventy-five cents.

As an inducement to our old subscribers to put forth some exertions to procure new subscribers, we will send to those who forward us one name and seventy-five cents, the Report of the Missouri State Horticultural Society, recently published. This Report is valuable to every Western fruit grower, and can be obtained so easily by this offer, that we hope to see it widely disseminated.

ANNUAL FAIR OF THE MERAMEC HORTICULTURAL SOCIETY.—The annual exhibition of this flourishing Society, will be held at Allenton on the 17th of this month. This is the oldest horticultural society in the State, has never failed to hold its regular monthly meetings, and numbers more active members at this time probably than ever before. The coming Fair will be held on the plan of the last one. No premiums are offered, but all are invited—horticulturists and others—to meet with the Society, join in the festivities, and exhibit whatever they have that is interesting. A pic-nic dinner will be provided, and several speeches may be expected as usual. Let all who would like to spend a day pleasantly and profitably, and see a splendid exhibition of Fruits and Flowers in particular, and "some punkins" in general, all free, attend this exhibition.

RED ASTRACHAN VS. DETERDING'S EARLY.—The following note is a private one—not intended for publication—but as many of our readers are interested in gaining all the light they can on the identity or non-identity of these varieties, we have taken the liberty to publish it:

Ed. Valley Farmer: Thanks for your letter and fruit forwarded by Dr. Morse. The Snedeker apples differ somewhat from those put in as Deterding's "from the market," but both so closely resemble the Red Astrachan that I feel quite confident they must be the same. They will be exhibited to-morrow, though rather too ripe. If anything new is developed you shall hear of the result. Our friend Beeler is now here, and he agrees with me that they both appear to be Astrachan.

JOHN A. WARDER.

Cincinnati, O., Aug. 8, 1863.

GASCONADE COUNTY FAIR.—The annual Exhibition of the Gasconade County Agricultural Society, will be held at Hermann on the 24th of this month. To horticulturists, this fair will be especially interesting. The fruit crop in that noted fruit growing locality, is, this year, we think, better than common, and an excellent display of Pomona's riches may be expected. The show of peaches and pears will not be as good as it would have been earlier in the month.

Several distinguished Eastern horticulturists contemplate visiting Hermann at that time, for the purpose of seeing the fruits, more especially the grapes, visiting the vineyards, and having a friendly and social interchange of opinion with the vine growers of Hermann.

Mr. P. B. Mead, Editor of the "Horticulturist," New York, and Dr. Warder, of Cincinnati, will probably be there, and a good time may be expected.

COTTONIZING FLAX.—We learn that the Commissioner of Agriculture, Hon. Isaac Newton, has appointed Hon. J. K. Moorhead, of Pittsburgh, Pa., Wm. M. Bailey Esq., of Providence, R. I., and Dr. Jno. A. Warder, of Cincinnati, Ohio, Commissioners on Cottonizing Flax, under the act of Congress appropriating liberally to that object.

No object is more worthy the attention of the Department of Agriculture, and the Commissioners we presume to be right men for the purpose. Dr. Warder we know to be a scientific and enthusiastic devotee to Agricultural improvement, and a fit representative of the Great West, though he can scarcely be said to be located in that interesting but rather indefinite region. The West has been his field of duty, and we congratulate the Department on having made a fortunate selection. It is to be hoped that the labors of the Commissioners will embrace the whole subject of improvements in flax manufacture. The production and manufacture of flax, is one of our too-much neglected resources, which demands at this time the earnest attention of agriculturists and manufacturers throughout the land.

COLE COUNTY (MO.) FAIR.—The Cole County Agricultural and Mechanical Association will hold their Second Annual Fair at Jefferson City, Oct. 4th, to continue five days. A large amount of money has been appropriated for premiums, and competition has been invited from all parts of the State. The Fair grounds and buildings have been put in excellent order, and arrangements have been made to give the exhibition such attractions as to invite a large attendance. Visitors to the Fair are charged only half price by the railroad company.

LASALLE COUNTY (ILL.) AGRICULTURAL SOCIETY.—Extensive preparations have been made by the managers of the La Salle Agricultural Society, to give interest to their Fifth Annual Fair, which commences Sept. 8th, and will continue four days. On one of these days, ladies are invited to display their equestrian skill, for the best exhibition of which, the first premium is $30, the second $20, and the third $10. The best exhibition by girls under sixteen entitled to two prizes, the first of $10, and the second of $5.—On three days, there will be trotting matches, where the premiums range from $25 to $200.

HOW TO MAKE CIDER WINE.—A correspondent of the "Country Gentleman" says:

"Put your new cider into clean casks or barrels, and allow it to ferment from one to three weeks, according as the weather is cool or warm. When it has attained to lively fermentation, add to each gallon ¾ of a pound of white sugar, and let the whole ferment again until it possesses nearly the brisk, pleasant taste which it is desirable should be permanent.—Pour out a quart of the cider and mix with it one quarter of an ounce of sulphite of lime for every gallon the cask contains. Stir it until it is intimately mixed, and pour the emulsion into the liquid. Agitate the contents of the cask thoroughly for a few moments, then let it rest that the cider may settle. Fermentation will be arrested at once, and will not be resumed. It may be bottled in the course of a few weeks, or it may be allowed to remain in the cask and used on draught. If bottled, it will become a sparkling cider—better than what is called champagne wine.

ED. VALLEY FARMER: I wish to know the best crosses for sheep, or, in other words, what kind of bucks would be best to put with a flock of some 400 head of sheep? Can you, or some of your correspondents, enlighten me? I have Merino, Saxon and Cotswold crosses. I want good wool and a heavy fleece, as yet I do not get more than 6 to 8½ in the gross from ewes; average, about 6 lbs. In raising sheep or stock of any kind, it is policy to have the best.

Sidney, Iowa, August 5th, 1863. A SUBSCRIBER.

CONTENTS OF NO. 9.

Agricultural.

Agricultural Science, - - - 257
Steam Cultivation, - - - 259
Fall Plowing; Shooting Birds, - - 262
The Bee Colony; School District Reports of Agriculture, - - - - 263
Soils for Meadows; Orchard Grass; Timothy and Clover; Hiving Bees, - - 264
Clean Fields; When to Cut Timber; Moisture in Soils, - - - - - - 265
Increasing Soil; Draining; Plow Deeper, 266

Stock Department.

Sheep Husbandry, - - - - 267
Animal Food for Horses, - - - 268
Blood Letting, - - - - 269
Horse Shoeing; Sheep Raising in Kansas, 271
Profitable Sheep; Care of Sheep; Remedy for Bone and Blood Spavin; About Sheep; Hogs Eating Grass, - - - - - 272

Horticultural.

Orchards in the West; Preserving Grapes, 273
Rabbits in Nurseries; Suggestions to Tree Planters, 274
Planting and Trenching of Orchards, - - 275
Meramec Horticultural Society, - - 278
The Ills. State Hort. Society, - - - 279

Home Circle.

Diet in Summer, - - - - - 280
Poetry; Late Flowers, - - - - 281
The Human Barometer; Disinfectant; Unlucky Moments; Dyspepsia, - - - - 282
August; Scraps, - - - - - 283
Draught of the Seine; Domestic Receipts, 284

Editor's Table.

Cottonising Flax; Red Astrachan; Cider Wine, 285

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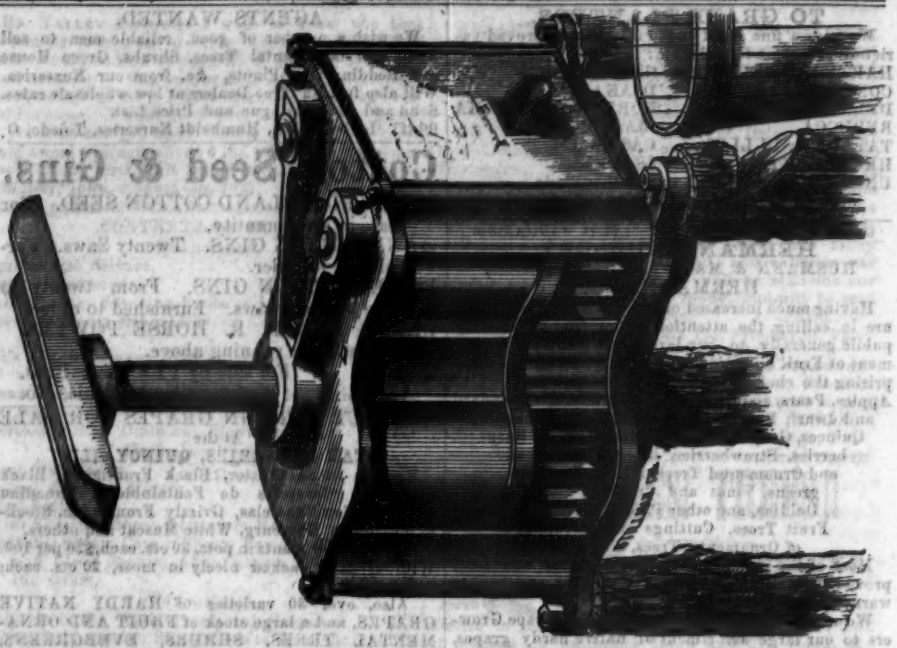

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